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<110> Lehmann-Bruinsma, Karin
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1. The first group of people who are not allowed to enter the country are those who are considered to be a threat to national security. This includes anyone who is involved in espionage, sabotage, or other activities that could harm the country's interests. These individuals are often identified by intelligence agencies and are placed on a watchlist. They are not allowed to enter the country until they have been cleared by the appropriate authorities.

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<210> 347
 <211> 878
 <212> PRT
 <213> Homo sapiens

<400> 347
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Ser	Ser	Gln	Arg	Ser	Val	Ala	Arg	Met	Asp	Gly	Asp	Val	Ile	Ile	Gly
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Ala	Leu	Phe	Ser	Val	His	His	Gln	Pro	Pro	Ala	Glu	Lys	Val	Pro	Glu
	50					55					60				
Arg	Lys	Cys	Gly	Glu	Ile	Arg	Glu	Gln	Tyr	Gly	Ile	Gln	Arg	Val	Glu
65					70					75					80
Ala	Met	Phe	His	Thr	Leu	Asp	Lys	Ile	Asn	Ala	Asp	Pro	Val	Leu	Leu
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Pro	Asn	Ile	Thr	Leu	Gly	Ser	Glu	Ile	Arg	Asp	Ser	Cys	Trp	His	Ser
			100					105					110		
Ser	Val	Ala	Leu	Glu	Gln	Ser	Ile	Glu	Phe	Ile	Arg	Asp	Ser	Leu	Ile
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Ser	Ile	Arg	Asp	Glu	Lys	Asp	Gly	Ile	Asn	Arg	Cys	Leu	Pro	Asp	Gly
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Gln	Ser	Leu	Pro	Pro	Gly	Arg	Thr	Lys	Lys	Pro	Ile	Ala	Gly	Val	Ile
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Gly	Pro	Gly	Ser	Ser	Ser	Val	Ala	Ile	Gln	Val	Gln	Asn	Leu	Leu	Gln
				165					170					175	
Leu	Phe	Asp	Ile	Pro	Gln	Ile	Ala	Tyr	Ser	Ala	Thr	Ser	Ile	Asp	Leu
			180					185					190		
Ser	Asp	Lys	Thr	Leu	Tyr	Lys	Tyr	Phe	Leu	Arg	Val	Val	Pro	Ser	Asp
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Thr	Tyr	Val	Ser	Ala	Val	His	Thr	Glu	Gly	Asn	Tyr	Gly	Glu	Ser	Gly
225					230					235					240
Met	Asp	Ala	Phe	Lys	Glu	Leu	Ala	Ala	Gln	Glu	Gly	Leu	Cys	Ile	Ala
				245					250					255	
His	Ser	Asp	Lys	Ile	Tyr	Ser	Asn	Ala	Gly	Glu	Lys	Ser	Phe	Asp	Arg
			260					265					270		
Leu	Leu	Arg	Lys	Leu	Arg	Glu	Arg	Leu	Pro	Lys	Ala	Arg	Val	Val	Val
		275					280					285			
Cys	Phe	Cys	Glu	Gly	Met	Thr	Val	Arg	Gly	Leu	Leu	Ser	Ala	Met	Arg
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Arg	Leu	Gly	Val	Val	Gly	Glu	Phe	Ser	Leu	Ile	Gly	Ser	Asp	Gly	Trp
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Ala	Asp	Arg	Asp	Glu	Val	Ile	Glu	Gly	Tyr	Glu	Val	Glu	Ala	Asn	Gly
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Gly	Ile	Thr	Ile	Lys	Leu	Gln	Ser	Pro	Glu	Val	Arg	Ser	Phe	Asp	Asp	
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Pro	Glu	Phe	Trp	Gln	His	Arg	Phe	Gln	Cys	Arg	Leu	Pro	Gly	His	Leu	
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Leu	Glu	Asn	Pro	Asn	Phe	Lys	Arg	Ile	Cys	Thr	Gly	Asn	Glu	Ser	Leu	
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Glu	Glu	Asn	Tyr	Val	Gln	Asp	Ser	Lys	Met	Gly	Phe	Val	Ile	Asn	Ala	
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Ile	Tyr	Ala	Met	Ala	His	Gly	Leu	Gln	Asn	Met	His	His	Ala	Leu	Cys	
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Pro	Gly	His	Val	Gly	Leu	Cys	Asp	Ala	Met	Lys	Pro	Ile	Asp	Gly	Ser	
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Lys	Leu	Leu	Asp	Phe	Leu	Ile	Lys	Ser	Ser	Phe	Ile	Gly	Val	Ser	Gly	
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Glu	Glu	Val	Trp	Phe	Asp	Glu	Lys	Gly	Asp	Ala	Pro	Gly	Arg	Tyr	Asp	
465					470					475					480	
Ile	Met	Asn	Leu	Gln	Tyr	Thr	Glu	Ala	Asn	Arg	Tyr	Asp	Tyr	Val	His	
			485						490					495		
Val	Gly	Thr	Trp	His	Glu	Gly	Val	Leu	Asn	Ile	Asp	Asp	Tyr	Lys	Ile	
			500					505					510			
Gln	Met	Asn	Lys	Ser	Gly	Val	Val	Arg	Ser	Val	Cys	Ser	Glu	Pro	Cys	
		515					520					525				
Leu	Lys	Gly	Gln	Ile	Lys	Val	Ile	Arg	Lys	Gly	Glu	Val	Ser	Cys	Cys	
	530					535					540					
Trp	Ile	Cys	Thr	Ala	Cys	Lys	Glu	Asn	Glu	Tyr	Val	Gln	Asp	Glu	Phe	
545					550					555					560	
Thr	Cys	Lys	Ala	Cys	Asp	Leu	Gly	Trp	Trp	Pro	Asn	Ala	Asp	Leu	Thr	
			565					570						575		
Gly	Cys	Glu	Pro	Ile	Pro	Val	Arg	Tyr	Leu	Glu	Trp	Ser	Asn	Ile	Glu	
			580					585					590			
Ser	Ile	Ile	Ala	Ile	Ala	Phe	Ser	Cys	Leu	Gly	Ile	Leu	Val	Thr	Leu	
		595					600					605				
Phe	Val	Thr	Leu	Ile	Phe	Val	Leu	Tyr	Arg	Asp	Thr	Pro	Val	Val	Lys	
	610					615					620					
Ser	Ser	Ser	Arg	Glu	Leu	Cys	Tyr	Ile	Ile	Leu	Ala	Gly	Ile	Phe	Leu	
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Gly Tyr Val Cys Pro Phe Thr Leu Ile Ala Lys Pro Thr Thr Thr Ser
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 Cys Tyr Leu Gln Arg Leu Leu Val Gly Leu Ser Ser Ala Met Cys Tyr
 660 665 670
 Ser Ala Leu Val Thr Lys Thr Asn Arg Ile Ala Arg Ile Leu Ala Gly
 675 680 685
 Ser Lys Lys Lys Ile Cys Thr Arg Lys Pro Arg Phe Met Ser Ala Trp
 690 695 700
 Ala Gln Val Ile Ile Ala Ser Ile Leu Ile Ser Val Gln Leu Thr Leu
 705 710 715 720
 Val Val Thr Leu Ile Ile Met Glu Pro Pro Met Pro Ile Leu Ser Tyr
 725 730 735
 Pro Ser Ile Lys Glu Val Tyr Leu Ile Cys Asn Thr Ser Asn Leu Gly
 740 745 750
 Val Val Ala Pro Leu Gly Tyr Asn Gly Leu Leu Ile Met Ser Cys Thr
 755 760 765
 Tyr Tyr Ala Phe Lys Thr Arg Asn Val Pro Ala Asn Phe Asn Glu Ala
 770 775 780
 Lys Tyr Ile Ala Phe Thr Met Tyr Thr Thr Cys Ile Ile Trp Leu Ala
 785 790 795 800
 Phe Val Pro Ile Tyr Phe Gly Ser Asn Tyr Lys Ile Ile Thr Thr Cys
 805 810 815
 Phe Ala Val Ser Leu Ser Val Thr Val Ala Leu Gly Cys Met Phe Thr
 820 825 830
 Pro Lys Met Tyr Ile Ile Ile Ala Lys Pro Glu Arg Asn Val Arg Ser
 835 840 845
 Ala Phe Thr Thr Ser Asp Val Val Arg Met His Val Gly Asp Gly Lys
 850 855 860
 Leu Pro Cys Arg Ser Asn Thr Phe Leu Asn Ile Phe Arg Arg
 865 870 875

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 <212> DNA
 <213> Homo sapiens

<400> 348
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<210> 349

<211> 31
 <212> DNA
 <213> Homo sapiens

<400> 349
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31

<210> 350
 <211> 1062
 <212> DNA
 <213> Homo sapiens

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 gtcattcttc cggtcgtgaa gaagtccaag ctgcactggg gcaacaacgt ccccgacatc 240
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 <211> 353
 <212> PRT
 <213> Homo sapiens

<400> 351
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 35 40 45
 Thr Ile Cys Leu Leu Gly Ile Ile Gly Asn Ser Thr Val Ile Phe Ala
 50 55 60
 Val Val Lys Lys Ser Lys Leu His Trp Cys Asn Asn Val Pro Asp Ile
 65 70 75 80
 Phe Ile Ile Asn Leu Ser Val Val Asp Leu Leu Phe Leu Leu Gly Met
 85 90 95

Pro Phe Met Ile His Gln Leu Met Gly Asn Gly Val Trp His Phe Gly
 100 105 110
 Glu Thr Met Cys Thr Leu Ile Thr Ala Met Asp Ala Asn Ser Gln Phe
 115 120 125
 Thr Ser Thr Tyr Ile Leu Thr Ala Met Ala Ile Asp Arg Tyr Leu Ala
 130 135 140
 Thr Val His Pro Ile Ser Ser Thr Lys Phe Arg Lys Pro Ser Val Ala
 145 150 155 160
 Thr Leu Val Ile Cys Leu Leu Trp Ala Leu Ser Phe Ile Ser Ile Thr
 165 170 175
 Pro Val Trp Leu Tyr Ala Arg Leu Ile Pro Phe Pro Gly Gly Ala Val
 180 185 190
 Gly Cys Gly Ile Arg Leu Pro Asn Pro Asp Thr Asp Leu Tyr Trp Phe
 195 200 205
 Thr Leu Tyr Gln Phe Phe Leu Ala Phe Ala Leu Pro Phe Val Val Ile
 210 215 220
 Thr Ala Ala Tyr Val Arg Ile Leu Gln Arg Met Thr Ser Ser Val Ala
 225 230 235 240
 Pro Ala Ser Gln Arg Ser Ile Arg Leu Arg Thr Lys Arg Val Lys Arg
 245 250 255
 Thr Ala Ile Ala Ile Cys Leu Val Phe Phe Val Cys Trp Ala Pro Tyr
 260 265 270
 Tyr Val Leu Gln Leu Thr Gln Leu Ser Ile Ser Arg Pro Thr Leu Thr
 275 280 285
 Phe Val Tyr Leu Tyr Asn Ala Ala Ile Ser Leu Gly Tyr Ala Asn Ser
 290 295 300
 Cys Leu Asn Pro Phe Val Tyr Ile Val Leu Cys Glu Thr Phe Arg Lys
 305 310 315 320
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 <212> DNA
 <213> Homo sapiens

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31

<210> 353
<211> 31
<212> DNA
<213> Homo sapiens

<400> 353
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31

<210> 354
<211> 1062
<212> DNA
<213> Homo sapiens

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<211> 353
<212> PRT
<213> Homo sapiens

<400> 355
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20 25 30
Thr Gly Ser Ile Ser Tyr Ile Asn Ile Ile Met Pro Ser Val Phe Gly
35 40 45
Thr Ile Cys Leu Leu Gly Ile Ile Gly Asn Ser Thr Val Ile Phe Ala
50 55 60

<210> 356
 <211> 70
 <212> DNA
 <213> Homo sapiens

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 tgagaagaag 70

<210> 357
 <211> 71
 <212> DNA
 <213> Homo sapiens

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 accttctgca g 71

<210> 358
 <211> 1349
 <212> DNA
 <213> Homo sapiens

<400> 358
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 gtcattctcg cggtcgtgaa gaagtccaag ctgcaactgg gcaacaacgt ccccgacatc 240
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<210> 359
 <211> 446
 <212> PRT
 <213> Homo sapiens

105040-60592860

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290

295

300

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Arg Leu Val Leu Ser Val Lys Pro Ala Ala Gln Gly Gln Leu Arg Ala
325 330 335

Val Ser Asn Ala Gln Thr Ala Asp Glu Glu Arg Thr Glu Ser Lys Gly
340 345 350

Thr Tyr Phe Pro Cys His Pro Ala His Leu Gln Val Arg Ala Pro Gln
355 360 365

His Ala Thr Gly Arg Asp Ala Glu Lys Asn Pro Arg Pro Leu Gly Lys
370 375 380

Cys Arg Lys Ala Gly Leu Gly Val Val Ala Met Lys Ile His Ser Met
385 390 395 400

Gly Ser His Val Ala Gly Glu Ala Trp Ser Gln Val Trp Gly Phe Gln
405 410 415

Ile Ser Glu Ile Pro Trp Gly Ser Arg Met Arg Pro Leu Asp Arg Thr
420 425 430

Glu Ala Glu Gln Glu Asn Met Leu Val Trp Ile Thr Gly Cys
435 440 445

<210> 360

<211> 33

<212> DNA

<213> Homo sapiens

<400> 360

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33

<210> 361

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<212> DNA

<213> Homo sapiens

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33

<210> 362

<211> 1062

<212> DNA

<213> Homo sapiens

<400> 362

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atcatcatgc cttcgggtgtt cggcaccatc tgccctctgg gcatcatcgg gaactccacg 180

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gtcatcttcg cggtcgtgaa gaagtccaag ctgcactggg gcaacaacgt ccccgacatc 240
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caccagctca tgggcaatgg ggtgtggcac tttggggaga ccatgtgcac cctcatcacg 360
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<210> 363
 <211> 353
 <212> PRT
 <213> Homo sapiens

<400> 363

Met	Asp	Leu	Glu	Ala	Ser	Leu	Leu	Pro	Thr	Gly	Pro	Asn	Ala	Ser	Asn	1	5	10	15
Thr	Ser	Asp	Gly	Pro	Asp	Asn	Leu	Thr	Ser	Ala	Gly	Ser	Pro	Pro	Arg	20	25	30	
Thr	Gly	Ser	Ile	Ser	Tyr	Ile	Asn	Ile	Ile	Met	Pro	Ser	Val	Phe	Gly	35	40	45	
Thr	Ile	Cys	Leu	Leu	Gly	Ile	Ile	Gly	Asn	Ser	Thr	Val	Ile	Phe	Ala	50	55	60	
Val	Val	Lys	Lys	Ser	Lys	Leu	His	Trp	Cys	Asn	Asn	Val	Pro	Asp	Ile	65	70	75	80
Phe	Ile	Ile	Asn	Leu	Ser	Val	Val	Asp	Leu	Leu	Phe	Leu	Leu	Gly	Met	85	90	95	
Pro	Phe	Met	Ile	His	Gln	Leu	Met	Gly	Asn	Gly	Val	Trp	His	Phe	Gly	100	105	110	
Glu	Thr	Met	Cys	Thr	Leu	Ile	Thr	Ala	Met	Asp	Ala	Asn	Ser	Gln	Phe	115	120	125	
Thr	Ser	Thr	Tyr	Ile	Leu	Thr	Ala	Met	Ala	Ile	Asp	Arg	Tyr	Leu	Ala	130	135	140	
Thr	Val	His	Pro	Ile	Ser	Ser	Thr	Lys	Phe	Arg	Lys	Pro	Ser	Val	Ala	145	150	155	160
Thr	Leu	Val	Ile	Cys	Leu	Leu	Trp	Ala	Leu	Ser	Phe	Ile	Ser	Ile	Thr	165	170	175	
Pro	Val	Trp	Leu	Tyr	Ala	Arg	Leu	Ile	Pro	Phe	Pro	Gly	Gly	Ala	Val				

<213> Homo sapiens

<400> 366

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atggacctgg aagcctcgct gctgccact ggtcccaatg ccagcaacac ctctgatggc 60
cccgataacc tcacttcggc aggatcacct cctcgcacgg ggagcatctc ctacatcaac 120
atcatcatgc cttcgggtgtt cggcaccatc tgcctcctgg gcatcatcgg gaactccacg 180
gtcatcttcg cggtcgtgaa gaagtccaag ctgcactggg gcaacaacgt ccccgacatc 240
ttcatcatca acctctcggg agtagatctc ctctttctcc tgggcatgcc cttcatgac 300
caccagctca tgggcaatgg ggtgtggcac tttggggaga ccatgtgcac cctcatcacg 360
gccatggatg ccaatagtca gttcaccagc acctacatcc tgaccgccat ggccattgac 420
cgctacctgg ccactgtcca ccccatctct tccacgaagt tccggaagcc ctctgtggcc 480
acctggtgga tctgcctcct gtgggcccctc tccttcatca gcatcacccc tgtgtggctg 540
tatgccagac tcatcccctt cccaggaggt gcagtgggct gcggcatacg cctgcccac 600
ccagacactg acctctactg gttcaccctg taccagtttt tcctggcctt tgccctgcct 660
tttgtggtca tcacagccgc atacgtgagg atcctgcagc gcatgacgtc ctcatggcc 720
cccgcctccc agcgcagcat ccggctgagg acaaagaggg tgaccgcgac agccatcgcc 780
atctgtctgg tcttctttgt gtgctgggca ctctactatg tgctacagct gaccagttg 840
tccatcagcc gccgaccct cactttgtc tacttataca atgcggccat cagcttggg 900
tatgccaaca gctgcctcaa cccctttgtg tacatcgtgc tctgtgagac gttccgcaa 960
cgcttgggtc tgtcggtgaa gcctgcagcc caggggcagc ttcgcgctgt cagcaacgct 1020
cagacggctg acgaggagag gacagaaagc aaaggcacct ga 1062
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<210> 367

<211> 353

<212> PRT

<213> Homo sapiens

<400> 367

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Met Asp Leu Glu Ala Ser Leu Leu Pro Thr Gly Pro Asn Ala Ser Asn
 1                5                10                15

Thr Ser Asp Gly Pro Asp Asn Leu Thr Ser Ala Gly Ser Pro Pro Arg
      20                25                30

Thr Gly Ser Ile Ser Tyr Ile Asn Ile Ile Met Pro Ser Val Phe Gly
 35                40                45

Thr Ile Cys Leu Leu Gly Ile Ile Gly Asn Ser Thr Val Ile Phe Ala
 50                55                60

Val Val Lys Lys Ser Lys Leu His Trp Cys Asn Asn Val Pro Asp Ile
 65                70                75                80

Phe Ile Ile Asn Leu Ser Val Val Asp Leu Leu Phe Leu Leu Gly Met
      85                90                95

Pro Phe Met Ile His Gln Leu Met Gly Asn Gly Val Trp His Phe Gly
    100                105                110

Glu Thr Met Cys Thr Leu Ile Thr Ala Met Asp Ala Asn Ser Gln Phe
    115                120                125

Thr Ser Thr Tyr Ile Leu Thr Ala Met Ala Ile Asp Arg Tyr Leu Ala
    130                135                140

Thr Val His Pro Ile Ser Ser Thr Lys Phe Arg Lys Pro Ser Val Ala
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145		150		155		160
Thr Leu Val Ile Cys Leu Leu Trp Ala Leu Ser Phe Ile Ser Ile Thr						
		165		170		175
Pro Val Trp Leu Tyr Ala Arg Leu Ile Pro Phe Pro Gly Gly Ala Val						
		180		185		190
Gly Cys Gly Ile Arg Leu Pro Asn Pro Asp Thr Asp Leu Tyr Trp Phe						
		195		200		205
Thr Leu Tyr Gln Phe Phe Leu Ala Phe Ala Leu Pro Phe Val Val Ile						
		210		215		220
Thr Ala Ala Tyr Val Arg Ile Leu Gln Arg Met Thr Ser Ser Val Ala						
		225		230		235
Pro Ala Ser Gln Arg Ser Ile Arg Leu Arg Thr Lys Arg Val Thr Arg						
		245		250		255
Thr Ala Ile Ala Ile Cys Leu Val Phe Phe Val Cys Trp Ala Leu Tyr						
		260		265		270
Tyr Val Leu Gln Leu Thr Gln Leu Ser Ile Ser Arg Pro Thr Leu Thr						
		275		280		285
Phe Val Tyr Leu Tyr Asn Ala Ala Ile Ser Leu Gly Tyr Ala Asn Ser						
		290		295		300
Cys Leu Asn Pro Phe Val Tyr Ile Val Leu Cys Glu Thr Phe Arg Lys						
		305		310		315
Arg Leu Val Leu Ser Val Lys Pro Ala Ala Gln Gly Gln Leu Arg Ala						
		325		330		335
Val Ser Asn Ala Gln Thr Ala Asp Glu Glu Arg Thr Glu Ser Lys Gly						
		340		345		350
Thr						

<210> 368
 <211> 34
 <212> DNA
 <213> Homo sapiens

<400> 368
 ggtcttcttt gtgtgctgcg caccctacta tgtg

34

<210> 369
 <211> 34
 <212> DNA
 <213> Homo sapiens

<400> 369

cacatagtag ggtgcgcgagc acacaaagaa gacc

34

<210> 370
<211> 1062
<212> DNA
<213> Homo sapiens

<400> 370
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cccgataacc tcaacttcggc aggatcacct cctcgcacgg ggagcatctc ctacatcaac 120
atcatcatgc cttcggtgtt cggcaccatc tgcctcctgg gcatcatcgg gaactccacg 180
gtcatcttcg cggtcgtgaa gaagtccaag ctgcactggg gcaacaacgt ccccgacatc 240
ttcatcatca acctctcggt agtagatctc ctctttctcc tgggcatgcc ctcatgatc 300
caccagctca tgggcaatgg ggtgtggcac tttggggaga ccatgtgcac cctcatcacg 360
gccatggatg ccaatagtca gttcaccagc acctacatcc tgaccgccat ggccattgac 420
cgctacctgg ccaactgtcca ccccatctct tccacgaagt tccggaagcc ctctgtggcc 480
accctggtga tctgcctcct gtgggcccct tccttcatca gcatcacccc tgtgtggctg 540
tatgccagac tcatccctct cccaggaggt gcagtgggct gcggcatacg cctgcccac 600
ccagacactg acctctactg gttcacctct taccagtttt tccctggcctt tgccctgcct 660
tttgtggtca tcacagccgc atacgtgagg atcctgcagc gcatgacgtc ctcaagtggc 720
cccgcctccc agcgagcat ccggtgcgg acaaagagg tgaccgcgac agccatcgcc 780
atctgtctgg tcttctttgt gtgctgcgca ccctactatg tgctacagct gaccagttg 840
tccatcagcc gcccgaccct cacctttgtc tacttataca atgcggccat cagcttgggc 900
tatgccaaca gctgcctcaa cccctttgtg tacatcgtgc tctgtgagac gttccgcaaa 960
cgcttggtcc tgtcggtgaa gcctgcagcc caggggcagc ttcgcgctgt cagcaacgct 1020
cagacggctg acgaggagag gacagaaagc aaaggcacct ga 1062

<210> 371
<211> 353
<212> PRT
<213> Homo sapiens

<400> 371
Met Asp Leu Glu Ala Ser Leu Leu Pro Thr Gly Pro Asn Ala Ser Asn
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Thr Ser Asp Gly Pro Asp Asn Leu Thr Ser Ala Gly Ser Pro Pro Arg
20 25 30
Thr Gly Ser Ile Ser Tyr Ile Asn Ile Ile Met Pro Ser Val Phe Gly
35 40 45
Thr Ile Cys Leu Leu Gly Ile Ile Gly Asn Ser Thr Val Ile Phe Ala
50 55 60
Val Val Lys Lys Ser Lys Leu His Trp Cys Asn Asn Val Pro Asp Ile
65 70 75 80
Phe Ile Ile Asn Leu Ser Val Val Asp Leu Leu Phe Leu Leu Gly Met
85 90 95
Pro Phe Met Ile His Gln Leu Met Gly Asn Gly Val Trp His Phe Gly
100 105 110
Glu Thr Met Cys Thr Leu Ile Thr Ala Met Asp Ala Asn Ser Gln Phe

115					120					125					
Thr	Ser	Thr	Tyr	Ile	Leu	Thr	Ala	Met	Ala	Ile	Asp	Arg	Tyr	Leu	Ala
130					135					140					
Thr	Val	His	Pro	Ile	Ser	Ser	Thr	Lys	Phe	Arg	Lys	Pro	Ser	Val	Ala
145					150					155					160
Thr	Leu	Val	Ile	Cys	Leu	Leu	Trp	Ala	Leu	Ser	Phe	Ile	Ser	Ile	Thr
				165					170					175	
Pro	Val	Trp	Leu	Tyr	Ala	Arg	Leu	Ile	Pro	Phe	Pro	Gly	Gly	Ala	Val
			180					185					190		
Gly	Cys	Gly	Ile	Arg	Leu	Pro	Asn	Pro	Asp	Thr	Asp	Leu	Tyr	Trp	Phe
		195					200					205			
Thr	Leu	Tyr	Gln	Phe	Phe	Leu	Ala	Phe	Ala	Leu	Pro	Phe	Val	Val	Ile
	210					215					220				
Thr	Ala	Ala	Tyr	Val	Arg	Ile	Leu	Gln	Arg	Met	Thr	Ser	Ser	Val	Ala
	225					230					235				240
Pro	Ala	Ser	Gln	Arg	Ser	Ile	Arg	Leu	Arg	Thr	Lys	Arg	Val	Thr	Arg
			245						250					255	
Thr	Ala	Ile	Ala	Ile	Cys	Leu	Val	Phe	Phe	Val	Cys	Cys	Ala	Pro	Tyr
			260					265					270		
Tyr	Val	Leu	Gln	Leu	Thr	Gln	Leu	Ser	Ile	Ser	Arg	Pro	Thr	Leu	Thr
		275					280					285			
Phe	Val	Tyr	Leu	Tyr	Asn	Ala	Ala	Ile	Ser	Leu	Gly	Tyr	Ala	Asn	Ser
	290					295					300				
Cys	Leu	Asn	Pro	Phe	Val	Tyr	Ile	Val	Leu	Cys	Glu	Thr	Phe	Arg	Lys
	305					310					315				320
Arg	Leu	Val	Leu	Ser	Val	Lys	Pro	Ala	Ala	Gln	Gly	Gln	Leu	Arg	Ala
				325					330					335	
Val	Ser	Asn	Ala	Gln	Thr	Ala	Asp	Glu	Glu	Arg	Thr	Glu	Ser	Lys	Gly
			340					345					350		
Thr															

<210> 372
 <211> 34
 <212> DNA
 <213> Homo sapiens

<400> 372
 ggtcttcttt gtgtgcttcg caccctacta tgtg

<210> 373
 <211> 34
 <212> DNA
 <213> Homo sapiens

<400> 373
 cacatagtag ggtgcgaagc acacaaagaa gacc

34

<210> 374
 <211> 1062
 <212> DNA
 <213> Homo sapiens

<400> 374
 atggacctgg aagcctcgct gctgcccact ggtcccaatg ccagcaaacac ctctgatggc 60
 cccgataacc tcacttcggc aggatcacct cctcgcacgg ggagcatctc ctacatcaac 120
 atcatcatgc cttcggtgtt cggcaccatc tgccctcctg gcatcatcgg gaactccacg 180
 gtcattcttc cggtcgtgaa gaagtccaag ctgcactggt gcaacaacgt ccccgacatc 240
 ttcatcatca acctctcggg agtagatctc ctctttctcc tgggcatgcc cttcatgatc 300
 caccagctca tgggcaatgg ggtgtggcac tttggggaga ccatgtgcac cctcatcacg 360
 gccatggatg ccaatagtca gttcaccagc acctacatcc tgaccgccat ggccattgac 420
 cgctacctgg ccactgtcca ccccatctct tccacgaagt tccggaagcc ctctgtggcc 480
 accctggtga tctgcctcct gtggggccctc tccttcatca gcatcacccc tgtgtggctg 540
 tatgccagac tcacccctt cccaggaggt gcagtgggct gcggcatacg cctgcccaac 600
 ccagacactg acctctactg gttcaccttg taccagtttt tcctggcctt tgccctgcct 660
 tttgtggtca tcacagccgc atacgtgagg atcctgcagc gcatgacgtc ctcatgtggc 720
 cccgcctccc agcgcagcat ccggctgcgg acaaagaggg tgacccgcac agccatcgcc 780
 atctgtctgg tcttctttgt gtgcttcgca ccctactatg tgctacagct gaccagttg 840
 tccatcagcc gcccgaccct cactttgtc tacttataca atgcggccat cagcttgggc 900
 tatgccaaca gctgcctcaa cccctttgtg tacatcgtgc tctgtgagac gttccgcaaa 960
 cgcttggtcc tgtcggtgaa gcctgcagcc cagggggcagc ttcgcgctgt cagcaacgct 1020
 cagacggctg acgaggagag gacagaaagc aaaggcacct ga 1062

<210> 375
 <211> 353
 <212> PRT
 <213> Homo sapiens

<400> 375
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 Thr Gly Ser Ile Ser Tyr Ile Asn Ile Ile Met Pro Ser Val Phe Gly
 35 40 45
 Thr Ile Cys Leu Leu Gly Ile Ile Gly Asn Ser Thr Val Ile Phe Ala
 50 55 60
 Val Val Lys Lys Ser Lys Leu His Trp Cys Asn Asn Val Pro Asp Ile
 65 70 75 80
 Phe Ile Ile Asn Leu Ser Val Val Asp Leu Leu Phe Leu Leu Gly Met

85

90

95

Pro Phe Met Ile His Gln Leu Met Gly Asn Gly Val Trp His Phe Gly
100 105 110

Glu Thr Met Cys Thr Leu Ile Thr Ala Met Asp Ala Asn Ser Gln Phe
115 120 125

Thr Ser Thr Tyr Ile Leu Thr Ala Met Ala Ile Asp Arg Tyr Leu Ala
130 135 140

Thr Val His Pro Ile Ser Ser Thr Lys Phe Arg Lys Pro Ser Val Ala
145 150 155 160

Thr Leu Val Ile Cys Leu Leu Trp Ala Leu Ser Phe Ile Ser Ile Thr
165 170 175

Pro Val Trp Leu Tyr Ala Arg Leu Ile Pro Phe Pro Gly Gly Ala Val
180 185 190

Gly Cys Gly Ile Arg Leu Pro Asn Pro Asp Thr Asp Leu Tyr Trp Phe
195 200 205

Thr Leu Tyr Gln Phe Phe Leu Ala Phe Ala Leu Pro Phe Val Val Ile
210 215 220

Thr Ala Ala Tyr Val Arg Ile Leu Gln Arg Met Thr Ser Ser Val Ala
225 230 235 240

Pro Ala Ser Gln Arg Ser Ile Arg Leu Arg Thr Lys Arg Val Thr Arg
245 250 255

Thr Ala Ile Ala Ile Cys Leu Val Phe Phe Val Cys Phe Ala Pro Tyr
260 265 270

Tyr Val Leu Gln Leu Thr Gln Leu Ser Ile Ser Arg Pro Thr Leu Thr
275 280 285

Phe Val Tyr Leu Tyr Asn Ala Ala Ile Ser Leu Gly Tyr Ala Asn Ser
290 295 300

Cys Leu Asn Pro Phe Val Tyr Ile Val Leu Cys Glu Thr Phe Arg Lys
305 310 315 320

Arg Leu Val Leu Ser Val Lys Pro Ala Ala Gln Gly Gln Leu Arg Ala
325 330 335

Val Ser Asn Ala Gln Thr Ala Asp Glu Glu Arg Thr Glu Ser Lys Gly
340 345 350

Thr

<210> 376

<11> 34

DNA

<213> Homo sapiens

<400> 376

gggtcttcttt gtgtgcttgg caccctacta tgtg

34

<210> 377

<211> 34

<212> DNA

<213> Homo sapiens

<400> 377

cacatagtag ggtgccaagc acacaaagaa gacc

34

<210> 378

<211> 1062

<212> DNA

<213> Homo sapiens

<400> 378

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cccgataacc tcacttcggc aggatcacct cctcgcacgg ggagcatctc ctacatcaac 120
atcatcatgc cttcggtgtt cggcaccatc tgctcctgg gcatcatcgg gaactccacg 180
gtcatcttcg cggtcgtgaa gaagtccaag ctgcactgg gcaacaacgt ccccgacatc 240
ttcatcatca acctctcggt agtagatctc ctctttctcc tgggcatgcc cttcatgac 300
caccagctca tgggcaatgg ggtgtggcac tttggggaga ccatgtgcac cctcatcacg 360
gccatggatg ccaatagtca gttcaccagc acctacatcc tgaccgcat ggccattgac 420
cgctacctgg cactgtcca ccccatctct tcacgaagt tccggaagcc ctctgtggcc 480
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tatgccagac tcatccctt cccaggaggt gcagtgggct gcggcatacg cctgcccac 600
ccagacactg acctctactg gttcaccctg taccagttt tctggcctt tgccctgct 660
tttgtggtca tcacagccgc atactgagg atcctgcagc gcatgacgtc ctcatgtggc 720
cccgccctcc agcgcagcat cgggtgcgg acaaagaggg tgaccgcac agccatcgcc 780
atctgtctgg tcttctttgt gtgcttggca cctactatg tgctacagct gaccagttg 840
tccatcagcc gcccgacct cacccttgtc tacttataca atgcggccat cagcttgggc 900
tatgccaaca gctgcctcaa ccccttggg tacatcgtgc tctgtgagac gttccgcaaa 960
cgcttggctc tgtcggtgaa gcctgcagcc caggggcagc ttcgcgctgt cagcaacgct 1020
cagacggctg acgaggagag gacagaaagc aaaggcacct ga 1062

<210> 379

<211> 353

<212> PRT

<213> Homo sapiens

<400> 379

Met Asp Leu Glu Ala Ser Leu Leu Pro Thr Gly Pro Asn Ala Ser Asn
1 5 10 15

Thr Ser Asp Gly Pro Asp Asn Leu Thr Ser Ala Gly Ser Pro Pro Arg
20 25 30

Thr Gly Ser Ile Ser Tyr Ile Asn Ile Ile Met Pro Ser Val Phe Gly
35 40 45

Thr Ile Cys Leu Leu Gly Ile Ile Gly Asn Ser Thr Val Ile Phe Ala

0936509-040504
T05040-605360

50					55					60					
Val	Val	Lys	Lys	Ser	Lys	Leu	His	Trp	Cys	Asn	Asn	Val	Pro	Asp	Ile
65					70					75					80
Phe	Ile	Ile	Asn	Leu	Ser	Val	Val	Asp	Leu	Leu	Phe	Leu	Leu	Gly	Met
			85						90					95	
Pro	Phe	Met	Ile	His	Gln	Leu	Met	Gly	Asn	Gly	Val	Trp	His	Phe	Gly
			100					105					110		
Glu	Thr	Met	Cys	Thr	Leu	Ile	Thr	Ala	Met	Asp	Ala	Asn	Ser	Gln	Phe
		115					120					125			
Thr	Ser	Thr	Tyr	Ile	Leu	Thr	Ala	Met	Ala	Ile	Asp	Arg	Tyr	Leu	Ala
	130					135					140				
Thr	Val	His	Pro	Ile	Ser	Ser	Thr	Lys	Phe	Arg	Lys	Pro	Ser	Val	Ala
145					150					155					160
Thr	Leu	Val	Ile	Cys	Leu	Leu	Trp	Ala	Leu	Ser	Phe	Ile	Ser	Ile	Thr
			165						170					175	
Pro	Val	Trp	Leu	Tyr	Ala	Arg	Leu	Ile	Pro	Phe	Pro	Gly	Gly	Ala	Val
			180					185					190		
Gly	Cys	Gly	Ile	Arg	Leu	Pro	Asn	Pro	Asp	Thr	Asp	Leu	Tyr	Trp	Phe
		195					200					205			
Thr	Leu	Tyr	Gln	Phe	Phe	Leu	Ala	Phe	Ala	Leu	Pro	Phe	Val	Val	Ile
	210					215					220				
Thr	Ala	Ala	Tyr	Val	Arg	Ile	Leu	Gln	Arg	Met	Thr	Ser	Ser	Val	Ala
225					230					235					240
Pro	Ala	Ser	Gln	Arg	Ser	Ile	Arg	Leu	Arg	Thr	Lys	Arg	Val	Thr	Arg
			245						250					255	
Thr	Ala	Ile	Ala	Ile	Cys	Leu	Val	Phe	Phe	Val	Cys	Leu	Ala	Pro	Tyr
		260						265					270		
Tyr	Val	Leu	Gln	Leu	Thr	Gln	Leu	Ser	Ile	Ser	Arg	Pro	Thr	Leu	Thr
		275					280					285			
Phe	Val	Tyr	Leu	Tyr	Asn	Ala	Ala	Ile	Ser	Leu	Gly	Tyr	Ala	Asn	Ser
	290					295					300				
Cys	Leu	Asn	Pro	Phe	Val	Tyr	Ile	Val	Leu	Cys	Glu	Thr	Phe	Arg	Lys
305					310					315					320
Arg	Leu	Val	Leu	Ser	Val	Lys	Pro	Ala	Ala	Gln	Gly	Gln	Leu	Arg	Ala
			325						330					335	
Val	Ser	Asn	Ala	Gln	Thr	Ala	Asp	Glu	Glu	Arg	Thr	Glu	Ser	Lys	Gly
			340					345					350		

Thr

0986509-040504

<210> 380
<211> 31
<212> DNA
<213> Homo sapiens

<400> 380
gccatctgtc tggatcatctt tgtgtgctgg g 31

<210> 381
<211> 31
<212> DNA
<213> Homo sapiens

<400> 381
cccagcacac aaagatgacc agacagatgg c 31

<210> 382
<211> 1062
<212> DNA
<213> Homo sapiens

<400> 382
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cccgataacc tcaacttcggc aggatcacct cctcgacacg ggagcatctc ctacatcaac 120
atcatcatgc cttcggtgtt cggcaccatc tgcctcctgg gcatcatcgg gaactccacg 180
gtcatcttcg cggtcgtgaa gaagtccaag ctgcactggg gcaacaacgt ccccgacatc 240
ttcatcatca acctctcggt agtagatctc ctcttttctc tgggcatgcc ctcatgatc 300
caccagctca tgggcaatgg ggtgtggcac tttggggaga ccatgtgcac cctcatcacg 360
gccatggatg ccaatagtca gttcaccagc acctacatcc tgaccgccat ggccattgac 420
cgctacctgg ccaactgtcca ccccatctct tccacgaagt tccggaagcc ctctgtggcc 480
accctggtga tctgcctcct gtgggcccctc tcttcatca gcatcacccc tgtgtggctg 540
tatgccagac tcatcccctt cccaggaggt gcagtgggct gcggcatacg cctgcccac 600
ccagacatcg acctctactg gttcacctgt taccagtttt tccctggcctt tgccctgcct 660
tttgtggtca tcacagccgc atacgtgagg atcctgcagc gcatgacgtc ctcatggcc 720
cccgccctcc agcgagcat ccggtgcgg acaaagaggg tgaccgcac agccatcgcc 780
atctgtctgg tcatctttgt gtgtgggca cctactatg tgctacagct gaccagttg 840
tccatcagcc gcccgaccct cacctttgtc tacttataca atgcggccat cagcttgggc 900
tatgccaaca gctgcctcaa cccctttgtg tacatcgtgc tctgtgagac gttccgcaaa 960
cgcttggtcc tgtcggtgaa gcctgcagcc caggggcagc ttcgcgctgt cagcaacgct 1020
cagacggctg acgaggagag gacagaaagc aaaggcacct ga 1062

<210> 383
<211> 353
<212> PRT
<213> Homo sapiens

<400> 383
Met Asp Leu Glu Ala Ser Leu Leu Pro Thr Gly Pro Asn Ala Ser Asn
1 5 10 15
Thr Ser Asp Gly Pro Asp Asn Leu Thr Ser Ala Gly Ser Pro Pro Arg

325

330

335

Val Ser Asn Ala Gln Thr Ala Asp Glu Glu Arg Thr Glu Ser Lys Gly
 340 345 350

Thr

<210> 384
 <211> 36
 <212> DNA
 <213> Homo sapiens

<400> 384
 cgcacagcca tcgcccagtg tctggtcttc tttgtg 36

<210> 385
 <211> 36
 <212> DNA
 <213> Homo sapiens

<400> 385
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<210> 386
 <211> 1062
 <212> DNA
 <213> Homo sapiens

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 atcatcatgc cttcggtggt cggcaccatc tgccctcctgg gcatcatcgg gaactccacg 180
 gtcattcttcg cggtcgtgaa gaagtccaag ctgcactggg gcaacaacgt ccccgacatc 240
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 caccagctca tgggcaatgg ggtgtggcac tttggggaga ccatgtgcac cctcatcacg 360
 gccatggatg ccaatagtca gttcaccagc acctacatcc tgaccgccat ggccattgac 420
 cgctacctgg ccaactgtcca ccccatctct tccacgaagt tccggaagcc ctctgtggcc 480
 acctggtga tctgctcct gtgggcccctc tcttcatca gcatcaccct tgtgtggctg 540
 tatgccagac tcatccccct cccaggaggt gcagtgggct gcggcatacg cctgcccac 600
 ccagacactg acctctactg gttcaccctg taccagtttt tccctggcctt tgccctgcct 660
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 cccgcctccc agcgagcat ccggctgagg acaaagaggg tgaccgcgac agccatcgcc 780
 cagtgtctgg tcttctttgt gtgtgtggga cctactatg tgctacagct gaccagttg 840
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 tatgccaaca gctgcctcaa cccctttgtg tacatcgtgc tctgtgagac gttccgcaaa 960
 cgcttgggtc tgtcggtgaa gcctgcagcc caggggcagc ttcgcgctgt cagcaacgct 1020
 cagacggctg acgaggagag gacagaaaagc aaaggcacct ga 1062

<210> 387
 <211> 353
 <212> PRT
 <213> Homo sapiens

<400> 387

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20 25 30
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35 40 45
Thr Ile Cys Leu Leu Gly Ile Ile Gly Asn Ser Thr Val Ile Phe Ala
50 55 60
Val Val Lys Lys Ser Lys Leu His Trp Cys Asn Asn Val Pro Asp Ile
65 70 75 80
Phe Ile Ile Asn Leu Ser Val Val Asp Leu Leu Phe Leu Leu Gly Met
85 90 95
Pro Phe Met Ile His Gln Leu Met Gly Asn Gly Val Trp His Phe Gly
100 105 110
Glu Thr Met Cys Thr Leu Ile Thr Ala Met Asp Ala Asn Ser Gln Phe
115 120 125
Thr Ser Thr Tyr Ile Leu Thr Ala Met Ala Ile Asp Arg Tyr Leu Ala
130 135 140
Thr Val His Pro Ile Ser Ser Thr Lys Phe Arg Lys Pro Ser Val Ala
145 150 155 160
Thr Leu Val Ile Cys Leu Leu Trp Ala Leu Ser Phe Ile Ser Ile Thr
165 170 175
Pro Val Trp Leu Tyr Ala Arg Leu Ile Pro Phe Pro Gly Gly Ala Val
180 185 190
Gly Cys Gly Ile Arg Leu Pro Asn Pro Asp Thr Asp Leu Tyr Trp Phe
195 200 205
Thr Leu Tyr Gln Phe Phe Leu Ala Phe Ala Leu Pro Phe Val Val Ile
210 215 220
Thr Ala Ala Tyr Val Arg Ile Leu Gln Arg Met Thr Ser Ser Val Ala
225 230 235 240
Pro Ala Ser Gln Arg Ser Ile Arg Leu Arg Thr Lys Arg Val Thr Arg
245 250 255
Thr Ala Ile Ala Gln Cys Leu Val Phe Phe Val Cys Trp Ala Pro Tyr
260 265 270
Tyr Val Leu Gln Leu Thr Gln Leu Ser Ile Ser Arg Pro Thr Leu Thr
275 280 285
Phe Val Tyr Leu Tyr Asn Ala Ala Ile Ser Leu Gly Tyr Ala Asn Ser

09026509 040504

290

295

300

Cys Leu Asn Pro Phe Val Tyr Ile Val Leu Cys Glu Thr Phe Arg Lys
305 310 315 320

Arg Leu Val Leu Ser Val Lys Pro Ala Ala Gln Gly Gln Leu Arg Ala
325 330 335

Val Ser Asn Ala Gln Thr Ala Asp Glu Glu Arg Thr Glu Ser Lys Gly
340 345 350

Thr

<210> 388

<211> 33

<212> DNA

<213> Homo sapiens

<400> 388

accgcatgg ccattaacgc gtacctggcc act

33

<210> 389

<211> 33

<212> DNA

<213> Homo sapiens

<400> 389

agtggccagg tagcggttaa tggccatggc ggt

33

<210> 390

<211> 1062

<212> DNA

<213> Homo sapiens

<400> 390

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atcatcatgc cttcggtgtt cggcaccatc tgctcctgg gcatcatcgg gaactccacg 180
gtcatcttcg cggtcgtgaa gaagtccaag ctgcactggg gcaacaacgt ccccgacatc 240
ttcatcatca acctctcggt agtagatctc ctctttctcc tgggcatgcc ctcatgatc 300
caccagctca tgggcaatgg ggtgtggcac tttggggaga ccatgtgcac cctcatcacg 360
gccatggatg ccaatagtca gttcaccagc acctacatcc tgaccgcat ggccattaac 420
cgctacctgg ccaactgtcca ccccatctct tccacgaagt tccggaagcc ctctgtggcc 480
acctgggtga tctgctcct gtgggcccct tcttcatca gcatcacccc tgtgtggctg 540
tatgccagac tcaccccctt cccaggagggt gcagtgggct gcggcatacg cctgcccac 600
ccagacactg acctctactg gttcacccctg taccagtttt tcttggcctt tgccctgct 660
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cccgcctccc agcgcagcat ccggtgcgg acaaagaggg tgaccgcac agccatcgcc 780
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<210> 391
 <211> 353
 <212> PRT
 <213> Homo sapiens

<400> 391

Met	Asp	Leu	Glu	Ala	Ser	Leu	Leu	Pro	Thr	Gly	Pro	Asn	Ala	Ser	Asn
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			20					25					30		
Thr	Gly	Ser	Ile	Ser	Tyr	Ile	Asn	Ile	Ile	Met	Pro	Ser	Val	Phe	Gly
		35					40					45			
Thr	Ile	Cys	Leu	Leu	Gly	Ile	Ile	Gly	Asn	Ser	Thr	Val	Ile	Phe	Ala
	50					55					60				
Val	Val	Lys	Lys	Ser	Lys	Leu	His	Trp	Cys	Asn	Asn	Val	Pro	Asp	Ile
	65				70					75					80
Phe	Ile	Ile	Asn	Leu	Ser	Val	Val	Asp	Leu	Leu	Phe	Leu	Leu	Gly	Met
				85					90					95	
Pro	Phe	Met	Ile	His	Gln	Leu	Met	Gly	Asn	Gly	Val	Trp	His	Phe	Gly
			100					105					110		
Glu	Thr	Met	Cys	Thr	Leu	Ile	Thr	Ala	Met	Asp	Ala	Asn	Ser	Gln	Phe
		115					120					125			
Thr	Ser	Thr	Tyr	Ile	Leu	Thr	Ala	Met	Ala	Ile	Asn	Arg	Tyr	Leu	Ala
	130					135					140				
Thr	Val	His	Pro	Ile	Ser	Ser	Thr	Lys	Phe	Arg	Lys	Pro	Ser	Val	Ala
145					150					155					160
Thr	Leu	Val	Ile	Cys	Leu	Leu	Trp	Ala	Leu	Ser	Phe	Ile	Ser	Ile	Thr
				165					170					175	
Pro	Val	Trp	Leu	Tyr	Ala	Arg	Leu	Ile	Pro	Phe	Pro	Gly	Gly	Ala	Val
			180					185					190		
Gly	Cys	Gly	Ile	Arg	Leu	Pro	Asn	Pro	Asp	Thr	Asp	Leu	Tyr	Trp	Phe
		195					200					205			
Thr	Leu	Tyr	Gln	Phe	Phe	Leu	Ala	Phe	Ala	Leu	Pro	Phe	Val	Val	Ile
	210					215					220				
Thr	Ala	Ala	Tyr	Val	Arg	Ile	Leu	Gln	Arg	Met	Thr	Ser	Ser	Val	Ala
225					230					235					240
Pro	Ala	Ser	Gln	Arg	Ser	Ile	Arg	Leu	Arg	Thr	Lys	Arg	Val	Thr	Arg
				245					250					255	
Thr	Ala	Ile	Ala	Ile	Cys	Leu	Val	Phe	Phe	Val	Cys	Trp	Ala	Pro	Tyr

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260

265

270

Tyr Val Leu Gln Leu Thr Gln Leu Ser Ile Ser Arg Pro Thr Leu Thr
 275 280 285

Phe Val Tyr Leu Tyr Asn Ala Ala Ile Ser Leu Gly Tyr Ala Asn Ser
 290 295 300

Cys Leu Asn Pro Phe Val Tyr Ile Val Leu Cys Glu Thr Phe Arg Lys
 305 310 315 320

Arg Leu Val Leu Ser Val Lys Pro Ala Ala Gln Gly Gln Leu Arg Ala
 325 330 335

Val Ser Asn Ala Gln Thr Ala Asp Glu Glu Arg Thr Glu Ser Lys Gly
 340 345 350

Thr

<210> 392
 <211> 32
 <212> DNA
 <213> Homo sapiens

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<210> 393
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 <212> DNA
 <213> Homo sapiens

<400> 393
 gaccgtcagc gtatatgccg ataactcgct tg 32

<210> 394
 <211> 2292
 <212> DNA
 <213> Homo sapiens

<400> 394
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 tgcaaggata ttcaacgcat cccagctta ccgcccagta cgcagactct gaagcttatt 180
 gagactcacc tgagaactat tccaagtcac gcattttcta atctgcccga tttttccaga 240
 atctacgtat ctatagatgt gactctgcag cagctggaat cacactcctt ctacaatttg 300
 agtaaaagtga ctcacataga aattcggaat accaggaact taacttacat agaccctgat 360
 gccctcaaag agctccccct cctaaagtgc cttggcattt tcaacactgg acttaaaatg 420
 ttccctgacc tgaccaaaagt ttattccact gatataattt ttatacttga aattacagac 480
 aacccttaca tgacgtcaat ccctgtgaat gcttttcagg gactatgcaa tgaaaccttg 540
 aactgaagc tgtacaacaa cggctttact tcagtccaag gatatgcttt caatgggaca 600
 aagctggatg ctgtttacct aaacaagaat aaatacctga cagttattga caaagatgca 660
 tttggaggag tatacagtgg accaagcttg ctggacgtgt ctcaaaccag tgtcactgcc 720

0036509 040501

115					120					125					
Lys	Phe	Leu	Gly	Ile	Phe	Asn	Thr	Gly	Leu	Lys	Met	Phe	Pro	Asp	Leu
130					135					140					
Thr	Lys	Val	Tyr	Ser	Thr	Asp	Ile	Phe	Phe	Ile	Leu	Glu	Ile	Thr	Asp
145					150					155					160
Asn	Pro	Tyr	Met	Thr	Ser	Ile	Pro	Val	Asn	Ala	Phe	Gln	Gly	Leu	Cys
				165					170					175	
Asn	Glu	Thr	Leu	Thr	Leu	Lys	Leu	Tyr	Asn	Asn	Gly	Phe	Thr	Ser	Val
			180					185					190		
Gln	Gly	Tyr	Ala	Phe	Asn	Gly	Thr	Lys	Leu	Asp	Ala	Val	Tyr	Leu	Asn
		195					200					205			
Lys	Asn	Lys	Tyr	Leu	Thr	Val	Ile	Asp	Lys	Asp	Ala	Phe	Gly	Gly	Val
	210					215					220				
Tyr	Ser	Gly	Pro	Ser	Leu	Leu	Asp	Val	Ser	Gln	Thr	Ser	Val	Thr	Ala
225					230					235					240
Leu	Pro	Ser	Lys	Gly	Leu	Glu	His	Leu	Lys	Glu	Leu	Ile	Ala	Arg	Asn
			245						250					255	
Thr	Trp	Thr	Leu	Lys	Lys	Leu	Pro	Leu	Ser	Leu	Ser	Phe	Leu	His	Leu
			260					265					270		
Thr	Arg	Ala	Asp	Leu	Ser	Tyr	Pro	Ser	His	Cys	Cys	Ala	Phe	Lys	Asn
		275					280					285			
Gln	Lys	Lys	Ile	Arg	Gly	Ile	Leu	Glu	Ser	Leu	Met	Cys	Asn	Glu	Ser
	290					295					300				
Ser	Met	Gln	Ser	Leu	Arg	Gln	Arg	Lys	Ser	Val	Asn	Ala	Leu	Asn	Ser
305					310					315				320	
Pro	Leu	His	Gln	Glu	Tyr	Glu	Glu	Asn	Leu	Gly	Asp	Ser	Ile	Val	Gly
			325						330					335	
Tyr	Lys	Glu	Lys	Ser	Lys	Phe	Gln	Asp	Thr	His	Asn	Asn	Ala	His	Tyr
		340						345					350		
Tyr	Val	Phe	Phe	Glu	Glu	Gln	Glu	Asp	Glu	Ile	Ile	Gly	Phe	Gly	Gln
		355					360					365			
Glu	Leu	Lys	Asn	Pro	Gln	Glu	Glu	Thr	Leu	Gln	Ala	Phe	Asp	Ser	His
	370					375					380				
Tyr	Asp	Tyr	Thr	Ile	Cys	Gly	Asp	Ser	Glu	Asp	Met	Val	Cys	Thr	Pro
385					390					395					400
Lys	Ser	Asp	Glu	Phe	Asn	Pro	Cys	Glu	Asp	Ile	Met	Gly	Tyr	Lys	Phe
			405						410					415	
Leu	Arg	Ile	Val	Val	Trp	Phe	Val	Ser	Leu	Leu	Ala	Leu	Leu	Gly	Asn

725

730

735

Asp Val Tyr Glu Leu Ile Glu Lys Ser His Leu Thr Pro Lys Lys Gln
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Gly Gln Ile Ser Glu Glu Tyr Met Gln Thr Val Leu
 755 760

<210> 396

<211> 31

<212> DNA

<213> Homo sapiens

<400> 396

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31

<210> 397

<211> 31

<212> DNA

<213> Homo sapiens

<400> 397

ttggcaattt tggtacctt gtcccctggg t

31

<210> 398

<211> 2292

<212> DNA

<213> Homo sapiens

<400> 398

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 tgcaaggata ttcaacgcat cccagctta ccgcccagta cgcagactct gaagcttatt 180
 gagactcacc tgagaactat tccaagtcac gcattttcta atctgcccac tatttccaga 240
 atctacgtat ctatagatgt gactctgcag cagctggaat cacactcctt ctacaatttg 300
 agtaaagtga ctcacataga aattcggaa accaggaact taacttacat agaccctgat 360
 gccctcaaag agctccccct cctaaagtgc cttggcattt tcaacactgg acttaaaatg 420
 ttccctgacc tgaccaaagt ttattccact gatataattt ttatacttga aattacagac 480
 aacccttaca tgacgtcaat ccctgtgaat gcttttcagg gactatgcaa tgaaaccttg 540
 aactgaagc tgtacaacaa cggctttact tcagtccaag gatattgctt caatgggaca 600
 aagctggatg ctgtttacct aaacaagaat aaatacctga cagttattga caaagatgca 660
 tttggaggag tatacagtgg accaagcttg ctggacgtgt ctcaaaccag tgtcactgcc 720
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 agccactgct gtgcctttta gaatcagaag aaaatcagag gaatccttga gtccttgatg 900
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 cccctccacc aggaatatga agagaatctg ggtgacagca ttgttgggta caaggaaaag 1020
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<210> 399

<211> 764

<212> PRT

<213> Homo sapiens

<400> 399

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 20 25 30

Gln Glu Glu Asp Phe Arg Val Thr Cys Lys Asp Ile Gln Arg Ile Pro
 35 40 45

Ser Leu Pro Pro Ser Thr Gln Thr Leu Lys Leu Ile Glu Thr His Leu
 50 55 60

Arg Thr Ile Pro Ser His Ala Phe Ser Asn Leu Pro Asn Ile Ser Arg
 65 70 75 80

Ile Tyr Val Ser Ile Asp Val Thr Leu Gln Gln Leu Glu Ser His Ser
 85 90 95

Phe Tyr Asn Leu Ser Lys Val Thr His Ile Glu Ile Arg Asn Thr Arg
 100 105 110

Asn Leu Thr Tyr Ile Asp Pro Asp Ala Leu Lys Glu Leu Pro Leu Leu
 115 120 125

Lys Phe Leu Gly Ile Phe Asn Thr Gly Leu Lys Met Phe Pro Asp Leu
 130 135 140

Thr Lys Val Tyr Ser Thr Asp Ile Phe Phe Ile Leu Glu Ile Thr Asp
 145 150 155 160

Asn Pro Tyr Met Thr Ser Ile Pro Val Asn Ala Phe Gln Gly Leu Cys
 165 170 175

Asn Glu Thr Leu Thr Leu Lys Leu Tyr Asn Asn Gly Phe Thr Ser Val

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Gln	Gly	Tyr	Ala	Phe	Asn	Gly	Thr	Lys	Leu	Asp	Ala	Val	Tyr	Leu	Asn	
		195					200					205				
Lys	Asn	Lys	Tyr	Leu	Thr	Val	Ile	Asp	Lys	Asp	Ala	Phe	Gly	Gly	Val	
		210				215					220					
Tyr	Ser	Gly	Pro	Ser	Leu	Leu	Asp	Val	Ser	Gln	Thr	Ser	Val	Thr	Ala	
		225				230				235						240
Leu	Pro	Ser	Lys	Gly	Leu	Glu	His	Leu	Lys	Glu	Leu	Ile	Ala	Arg	Asn	
				245					250							255
Thr	Trp	Thr	Leu	Lys	Lys	Leu	Pro	Leu	Ser	Leu	Ser	Phe	Leu	His	Leu	
			260					265								270
Thr	Arg	Ala	Asp	Leu	Ser	Tyr	Pro	Ser	His	Cys	Cys	Ala	Phe	Lys	Asn	
			275				280					285				
Gln	Lys	Lys	Ile	Arg	Gly	Ile	Leu	Glu	Ser	Leu	Met	Cys	Asn	Glu	Ser	
		290				295					300					
Ser	Met	Gln	Ser	Leu	Arg	Gln	Arg	Lys	Ser	Val	Asn	Ala	Leu	Asn	Ser	
		305				310				315						320
Pro	Leu	His	Gln	Glu	Tyr	Glu	Glu	Asn	Leu	Gly	Asp	Ser	Ile	Val	Gly	
				325					330							335
Tyr	Lys	Glu	Lys	Ser	Lys	Phe	Gln	Asp	Thr	His	Asn	Asn	Ala	His	Tyr	
			340					345								350
Tyr	Val	Phe	Phe	Glu	Glu	Gln	Glu	Asp	Glu	Ile	Ile	Gly	Phe	Gly	Gln	
			355					360								365
Glu	Leu	Lys	Asn	Pro	Gln	Glu	Glu	Thr	Leu	Gln	Ala	Phe	Asp	Ser	His	
						375					380					
Tyr	Asp	Tyr	Thr	Ile	Cys	Gly	Asp	Ser	Glu	Asp	Met	Val	Cys	Thr	Pro	
		385				390				395						400
Lys	Ser	Asp	Glu	Phe	Asn	Pro	Cys	Glu	Asp	Ile	Met	Gly	Tyr	Lys	Phe	
				405					410							415
Leu	Arg	Ile	Val	Val	Trp	Phe	Val	Ser	Leu	Leu	Ala	Leu	Leu	Gly	Asn	
			420					425								430
Val	Phe	Val	Leu	Leu	Ile	Leu	Leu	Thr	Ser	His	Tyr	Lys	Leu	Asn	Val	
			435					440								445
Pro	Arg	Phe	Leu	Met	Cys	Asn	Leu	Ala	Phe	Ala	Asp	Phe	Cys	Met	Gly	
						455					460					
Met	Tyr	Leu	Leu	Leu	Ile	Ala	Ser	Val	Asp	Leu	Tyr	Thr	His	Ser	Glu	
		465				470				475						480
Tyr	Tyr	Asn	His	Ala	Ile	Asp	Trp	Gln	Thr	Gly	Pro	Gly	Cys	Asn	Thr	

495

[illegible]

90

<213> Homo sapiens

<400> 400

aaagataacca aaattatcaa gaggatggct gt

32

<210> 401

<211> 32

<212> DNA

<213> Homo sapiens

<400> 401

acagccatcc tcttgataat tttggtatct tt

32

<210> 402

<211> 2292

<212> DNA

<213> Homo sapiens

<400> 402

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tgcaaggata ttcaacgcat cccagctta cgcgccagta cgcagactct gaagcttatt 180
gagactcacc tgagaactat tccaagtcac gcattttcta atctgccaa tatttccaga 240
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Val	Phe	Val 435	Leu	Leu	Ile	Leu	Leu 440	Thr	Ser	His	Tyr	Lys 445	Leu	Asn	Val
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680

685

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Ala Tyr Arg Gly Gln Arg Val Pro Pro Lys Asn Ser Thr Asp Ile Gln
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 35 40 45
 Ser Leu Pro Pro Ser Thr Gln Thr Leu Lys Leu Ile Glu Thr His Leu
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 Arg Thr Ile Pro Ser His Ala Phe Ser Asn Leu Pro Asn Ile Ser Arg
 65 70 75 80
 Ile Tyr Val Ser Ile Asp Val Thr Leu Gln Gln Leu Glu Ser His Ser
 85 90 95
 Phe Tyr Asn Leu Ser Lys Val Thr His Ile Glu Ile Arg Asn Thr Arg
 100 105 110
 Asn Leu Thr Tyr Ile Asp Pro Asp Ala Leu Lys Glu Leu Pro Leu Leu
 115 120 125
 Lys Phe Leu Gly Ile Phe Asn Thr Gly Leu Lys Met Phe Pro Asp Leu

130		135		140
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Asn 180	Glu Thr Leu Thr	Leu 180	Lys Leu Tyr Asn 185	Asn Gly Phe Thr Ser Val 190
Gln 195	Gly Tyr Ala Phe	Asn 195	Gly Thr Lys Leu Asp 200	Ala Val Tyr Leu Asn 205
Lys 210	Asn Lys Tyr Leu	Thr 210	Val Ile Asp Lys Asp 220	Ala Phe Gly Gly Val 220
Tyr 225	Ser Gly Pro Ser	Leu 230	Leu Asp Val Ser 235	Gln Thr Ser Val Thr Ala 240
Leu 245	Pro Ser Lys Gly	Leu 245	Glu His Leu Lys 250	Glu Leu Ile Ala Arg Asn 255
Thr 260	Trp Thr Leu Lys	Lys 260	Lys Leu Pro Leu 265	Ser Leu Ser Phe Leu His Leu 270
Thr 275	Arg Ala Asp Leu	Ser 275	Tyr Pro Ser His 280	Cys Cys Ala Phe Lys Asn 285
Gln 290	Lys Lys Ile Arg	Gly 290	Ile Leu Glu Ser 300	Leu Met Cys Asn Glu Ser 300
Ser 305	Met Gln Ser Leu	Arg 310	Gln Arg Lys Ser 315	Val Asn Ala Leu Asn Ser 320
Pro 325	Leu His Gln Glu	Tyr 325	Glu Glu Asn Leu 330	Gly Asp Ser Ile Val Gly 335
Tyr 340	Lys Glu Lys Ser	Lys 340	Phe Gln Asp Thr 345	His Asn Asn Ala His Tyr 350
Tyr 355	Val Phe Phe Glu	Glu 355	Glu Gln Asp Glu 360	Ile Ile Gly Phe Gly Gln 365
Glu 370	Leu Lys Asn Pro	Gln 375	Glu Glu Thr Leu 380	Gln Ala Phe Asp Ser His 380
Tyr 385	Asp Tyr Thr Ile	Cys 390	Gly Asp Ser Glu 395	Asp Met Val Cys Thr Pro 400
Lys 405	Ser Asp Glu Phe	Asn 405	Pro Cys Glu Asp 410	Ile Met Gly Tyr Lys Phe 415
Leu 420	Arg Ile Val Val	Trp 425	Phe Val Ser Leu 430	Leu Ala Leu Leu Gly Asn 430
Val 440	Phe Val Leu Leu	Ile 440	Leu Leu Thr Ser 445	His Tyr Lys Leu Asn Val 445

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Thr Val Ile Thr Leu Glu Arg Trp Tyr Ala Ile Thr Phe Ala Met Arg					515			520							525		
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745

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34

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<400> 419

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 35 40 45

Ser Leu Pro Pro Ser Thr Gln Thr Leu Lys Leu Ile Glu Thr His Leu
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Arg Thr Ile Pro Ser His Ala Phe Ser Asn Leu Pro Asn Ile Ser Arg
 65 70 75 80

Ile Tyr Val Ser Ile Asp Val Thr Leu Gln Gln Leu Glu Ser His Ser
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Phe Tyr Asn Leu Ser Lys Val Thr His Ile Glu Ile Arg Asn Thr Arg
 100 105 110

Asn Leu Thr Tyr Ile Asp Pro Asp Ala Leu Lys Glu Leu Pro Leu Leu
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Lys Phe Leu Gly Ile Phe Asn Thr Gly Leu Lys Met Phe Pro Asp Leu
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Thr Lys Val Tyr Ser Thr Asp Ile Phe Phe Ile Leu Glu Ile Thr Asp
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Tyr	Asp	Tyr	Thr	Ile	Cys	Gly	Asp	Ser	Glu	Asp	Met	Val	Cys	Thr	Pro
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Lys	Ser	Asp	Glu	Phe	Asn	Pro	Cys	Glu	Asp	Ile	Met	Gly	Tyr	Lys	Phe
				405					410					415	
Leu	Arg	Ile	Val	Val	Trp	Phe	Val	Ser	Leu	Leu	Ala	Leu	Leu	Gly	Asn
			420					425					430		
Val	Phe	Val	Leu	Leu	Ile	Leu	Leu	Thr	Ser	His	Tyr	Lys	Leu	Asn	Val
		435					440					445			
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Tyr	Tyr	Asn	His	Ala	Ile	Asp	Trp	Gln	Thr	Gly	Pro	Gly	Cys	Asn	Thr
				485					490					495	
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33

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<211> 33

<212> DNA

<213> Homo sapiens

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33

<210> 422

<211> 2292

<212> DNA

<213> Homo sapiens

<400> 422

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gagactcacc tgagaactat tccaagtcac gcattttcta atctgcccac tatttccaga 240
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 <212> PRT
 <213> Homo sapiens

<400> 423

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 35 40 45

Ser Leu Pro Pro Ser Thr Gln Thr Leu Lys Leu Ile Glu Thr His Leu
 50 55 60

Arg Thr Ile Pro Ser His Ala Phe Ser Asn Leu Pro Asn Ile Ser Arg
 65 70 75 80

Ile Tyr Val Ser Ile Asp Val Thr Leu Gln Gln Leu Glu Ser His Ser
 85 90 95

Phe Tyr Asn Leu Ser Lys Val Thr His Ile Glu Ile Arg Asn Thr Arg
 100 105 110

Asn Leu Thr Tyr Ile Asp Pro Asp Ala Leu Lys Glu Leu Pro Leu Leu
 115 120 125

Lys Phe Leu Gly Ile Phe Asn Thr Gly Leu Lys Met Phe Pro Asp Leu
 130 135 140

Thr Lys Val Tyr Ser Thr Asp Ile Phe Phe Ile Leu Glu Ile Thr Asp
 145 150 155 160

Asn Pro Tyr Met Thr Ser Ile Pro Val Asn Ala Phe Gln Gly Leu Cys
 165 170 175

Asn Glu Thr Leu Thr Leu Lys Leu Tyr Asn Asn Gly Phe Thr Ser Val
 180 185 190

Gln Gly Tyr Ala Phe Asn Gly Thr Lys Leu Asp Ala Val Tyr Leu Asn
 195 200 205

Lys Asn Lys Tyr Leu Thr Val Ile Asp Lys Asp Ala Phe Gly Gly Val
 210 215 220

Tyr Ser Gly Pro Ser Leu Leu Asp Val Ser Gln Thr Ser Val Thr Ala
 225 230 235 240

Leu Pro Ser Lys Gly Leu Glu His Leu Lys Glu Leu Ile Ala Arg Asn
 245 250 255

Thr Trp Thr Leu Lys Lys Leu Pro Leu Ser Leu Ser Phe Leu His Leu

60540-605350

60592860

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Gln	Lys	Lys	Ile	Arg	Gly	Ile	Leu	Glu	Ser	Leu	Met	Cys	Asn	Glu	Ser				
	290					295					300								
Ser	Met	Gln	Ser	Leu	Arg	Gln	Arg	Lys	Ser	Val	Asn	Ala	Leu	Asn	Ser				
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Tyr	Lys	Glu	Lys	Ser	Lys	Phe	Gln	Asp	Thr	His	Asn	Asn	Ala	His	Tyr				
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		355					360					365							
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Tyr	Asp	Tyr	Thr	Ile	Cys	Gly	Asp	Ser	Glu	Asp	Met	Val	Cys	Thr	Pro				
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Lys	Ser	Asp	Glu	Phe	Asn	Pro	Cys	Glu	Asp	Ile	Met	Gly	Tyr	Lys	Phe				
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Leu	Arg	Ile	Val	Val	Trp	Phe	Val	Ser	Leu	Leu	Ala	Leu	Leu	Gly	Asn				
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Val	Phe	Val	Leu	Leu	Ile	Leu	Leu	Thr	Ser	His	Tyr	Lys	Leu	Asn	Val				
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Pro	Arg	Phe	Leu	Met	Cys	Asn	Leu	Ala	Phe	Ala	Asp	Phe	Cys	Met	Gly				
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Met	Tyr	Leu	Leu	Leu	Ile	Ala	Ser	Val	Asp	Leu	Tyr	Thr	His	Ser	Glu				
465					470					475					480				
Tyr	Tyr	Asn	His	Ala	Ile	Asp	Trp	Gln	Thr	Gly	Pro	Gly	Cys	Asn	Thr				
			485						490					495					
Ala	Gly	Phe	Phe	Thr	Val	Phe	Ala	Ser	Glu	Leu	Ser	Ala	Tyr	Thr	Leu				
			500					505					510						
Thr	Val	Ile	Thr	Leu	Glu	Arg	Trp	Tyr	Ala	Ile	Thr	Phe	Ala	Met	Arg				
		515					520					525							
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Gly	Trp	Val	Cys	Cys	Phe	Leu	Leu	Ala	Leu	Leu	Pro	Leu	Val	Gly	Ile				
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60533560

565

570

575

Pro Leu Ala Leu Ala Tyr Ile Val Phe Val Leu Thr Leu Asn Ile Val
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Ala Phe Val Ile Val Cys Cys Cys Tyr Val Lys Ile Tyr Ile Thr Val
595 600 605

Arg Asn Pro Gln Tyr Asn Pro Gly Asp Lys Asp Thr Lys Ile Lys Lys
610 615 620

Arg Met Ala Val Leu Ile Phe Thr Asp Phe Ile Cys Met Ala Pro Ile
625 630 635 640

Ser Phe Tyr Ala Leu Ser Ala Ile Leu Asn Lys Pro Leu Ile Thr Val
645 650 655

Ser Asn Ser Lys Ile Leu Leu Val Leu Phe Tyr Pro Leu Asn Ser Tyr
660 665 670

Ala Asn Pro Phe Leu Tyr Ala Ile Phe Thr Lys Ala Phe Gln Arg Asp
675 680 685

Val Phe Ile Leu Leu Ser Lys Phe Gly Ile Cys Lys Arg Gln Ala Gln
690 695 700

Ala Tyr Arg Gly Gln Arg Val Pro Pro Lys Asn Ser Thr Asp Ile Gln
705 710 715 720

Val Gln Lys Val Thr His Glu Met Arg Gln Gly Leu His Asn Met Glu
725 730 735

Asp Val Tyr Glu Leu Ile Glu Lys Ser His Leu Thr Pro Lys Lys Gln
740 745 750

Gly Gln Ile Ser Glu Glu Tyr Met Gln Thr Val Leu
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<211> 1266

<212> DNA

<213> Homo sapiens

<400> 424

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<211> 421
<212> PRT
<213> Homo sapiens

<400> 425
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35 40 45
Cys Ala Val Leu Gly Asn Ala Cys Val Val Ala Ala Ile Ala Leu Glu
50 55 60
Arg Ser Leu Gln Asn Val Ala Asn Tyr Leu Ile Gly Ser Leu Ala Val
65 70 75 80
Thr Asp Leu Met Val Ser Val Leu Val Leu Pro Met Ala Ala Leu Tyr
85 90 95
Gln Val Leu Asn Lys Trp Thr Leu Gly Gln Val Thr Cys Asp Leu Phe
100 105 110
Ile Ala Leu Asp Val Leu Cys Cys Thr Ser Ser Ile Leu His Leu Cys
115 120 125
Ala Ile Ala Leu Asp Arg Tyr Trp Ala Ile Thr Asp Pro Ile Asp Tyr
130 135 140
Val Asn Lys Arg Thr Pro Arg Pro Arg Ala Leu Ile Ser Leu Thr Trp
145 150 155 160
Leu Ile Gly Phe Leu Ile Ser Ile Pro Pro Ile Leu Gly Trp Arg Thr
165 170 175
Pro Glu Asp Arg Ser Asp Pro Asp Ala Cys Thr Ile Ser Lys Asp His
180 185 190
Gly Tyr Thr Ile Tyr Ser Thr Phe Gly Ala Phe Tyr Ile Pro Leu Leu
195 200 205

Leu Met Leu Val Leu Tyr Gly Arg Ile Phe Arg Ala Ala Arg Phe Arg
 210 215 220
 Ile Arg Lys Thr Val Lys Lys Val Glu Lys Thr Gly Ala Asp Thr Arg
 225 230 235 240
 His Gly Ala Ser Pro Ala Pro Gln Pro Lys Lys Ser Val Asn Gly Glu
 245 250 255
 Ser Gly Ser Arg Asn Trp Arg Leu Gly Val Glu Ser Lys Ala Gly Gly
 260 265 270
 Ala Leu Cys Ala Asn Gly Ala Val Arg Gln Gly Asp Asp Gly Ala Ala
 275 280 285
 Leu Glu Val Ile Glu Val His Arg Val Gly Asn Ser Lys Glu His Leu
 290 295 300
 Pro Leu Pro Ser Glu Ala Gly Pro Thr Pro Cys Ala Pro Ala Ser Phe
 305 310 315 320
 Glu Arg Lys Asn Glu Arg Asn Ala Glu Ala Lys Arg Lys Met Ala Leu
 325 330 335
 Ala Arg Glu Arg Lys Thr Lys Lys Thr Leu Gly Ile Ile Met Gly Thr
 340 345 350
 Phe Ile Leu Cys Trp Leu Pro Phe Phe Ile Val Ala Leu Val Leu Pro
 355 360 365
 Phe Cys Glu Ser Ser Cys His Met Pro Thr Leu Leu Gly Ala Ile Ile
 370 375 380
 Asn Trp Leu Gly Tyr Ser Asn Ser Leu Leu Asn Pro Val Ile Tyr Ala
 385 390 395 400
 Tyr Phe Asn Lys Asp Phe Gln Asn Ala Phe Lys Lys Ile Ile Lys Cys
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 Asn Phe Cys Arg Gln
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<210> 426
 <211> 1173
 <212> DNA
 <213> Homo sapiens

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<210> 427
 <211> 390
 <212> PRT
 <213> Homo sapiens

<400> 427

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Cys Ser Ala Lys Asp Tyr Ile Tyr Gln Asp Ser Ile Ser Leu Pro Trp
 35 40 45

Lys Val Leu Leu Val Met Leu Leu Ala Leu Ile Thr Leu Ala Thr Thr
 50 55 60

Leu Ser Asn Ala Phe Val Ile Ala Thr Val Tyr Arg Thr Arg Lys Leu
 65 70 75 80

His Thr Pro Ala Asn Tyr Leu Ile Ala Ser Leu Ala Val Thr Asp Leu
 85 90 95

Leu Val Ser Ile Leu Val Met Pro Ile Ser Thr Met Tyr Thr Val Thr
 100 105 110

Gly Arg Trp Thr Leu Gly Gln Val Val Cys Asp Phe Trp Leu Ser Ser
 115 120 125

Asp Ile Thr Cys Cys Thr Ala Ser Ile Leu His Leu Cys Val Ile Ala
 130 135 140

Leu Asp Arg Tyr Trp Ala Ile Thr Asp Ala Val Glu Tyr Ser Ala Lys
 145 150 155 160

Arg Thr Pro Lys Arg Ala Ala Val Met Ile Ala Leu Val Trp Val Phe
 165 170 175

Ser Ile Ser Ile Ser Leu Pro Pro Phe Phe Trp Arg Gln Ala Lys Ala
 180 185 190

Glu Glu Glu Val Ser Glu Cys Val Val Asn Thr Asp His Ile Leu Tyr

195					200					205					
Thr	Val	Tyr	Ser	Thr	Val	Gly	Ala	Phe	Tyr	Phe	Pro	Thr	Leu	Leu	Leu
210					215					220					
Ile	Ala	Leu	Tyr	Gly	Arg	Ile	Tyr	Val	Glu	Ala	Arg	Ser	Arg	Ile	Leu
225					230					235					240
Lys	Gln	Thr	Pro	Asn	Arg	Thr	Gly	Lys	Arg	Leu	Thr	Arg	Ala	Gln	Leu
				245					250					255	
Ile	Thr	Asp	Ser	Pro	Gly	Ser	Thr	Ser	Ser	Val	Thr	Ser	Ile	Asn	Ser
			260					265					270		
Arg	Val	Pro	Asp	Val	Pro	Ser	Glu	Ser	Gly	Ser	Pro	Val	Tyr	Val	Asn
		275					280					285			
Gln	Val	Lys	Val	Arg	Val	Ser	Asp	Ala	Leu	Leu	Glu	Lys	Lys	Lys	Leu
290					295					300					
Met	Ala	Ala	Arg	Glu	Arg	Lys	Ala	Lys	Lys	Thr	Leu	Gly	Ile	Ile	Leu
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Gly	Ala	Phe	Ile	Val	Cys	Trp	Leu	Pro	Phe	Phe	Ile	Ile	Ser	Leu	Val
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Met	Pro	Ile	Cys	Lys	Asp	Ala	Cys	Trp	Phe	His	Leu	Ala	Ile	Phe	Asp
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Phe	Phe	Thr	Trp	Leu	Gly	Tyr	Leu	Asn	Ser	Leu	Ile	Asn	Pro	Ile	Ile
		355					360					365			
Tyr	Thr	Met	Ser	Asn	Glu	Asp	Phe	Lys	Gln	Ala	Phe	His	Lys	Leu	Ile
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Arg	Phe	Lys	Cys	Thr	Ser										
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<210> 428
 <211> 1134
 <212> DNA
 <213> Homo sapiens

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<210> 429
<211> 377
<212> PRT
<213> Homo sapiens

<400> 429
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Thr Leu Gln Ala Leu Lys Ile Ser Leu Ala Val Val Leu Ser Val Ile
35 40 45
Thr Leu Ala Thr Val Leu Ser Asn Ala Phe Val Leu Thr Thr Ile Leu
50 55 60
Leu Thr Arg Lys Leu His Thr Pro Ala Asn Tyr Leu Ile Gly Ser Leu
65 70 75 80
Ala Thr Thr Asp Leu Leu Val Ser Ile Leu Val Met Pro Ile Ser Ile
85 90 95
Ala Tyr Thr Ile Thr His Thr Trp Asn Phe Gly Gln Ile Leu Cys Asp
100 105 110
Ile Trp Leu Ser Ser Asp Ile Thr Cys Cys Thr Ala Ser Ile Leu His
115 120 125
Leu Cys Val Ile Ala Leu Asp Arg Tyr Trp Ala Ile Thr Asp Ala Leu
130 135 140
Glu Tyr Ser Lys Arg Arg Thr Ala Gly His Ala Ala Thr Met Ile Ala
145 150 155 160
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Ala Val Thr Asp Leu Leu Val Ala Val Leu Val Met Pro Leu Ser Ile
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Val Trp Leu Ser Val Asp Met Thr Cys Cys Thr Cys Ser Ile Leu His
100 105 110

Glu Tyr Ala Arg Lys Arg Thr Ala Lys Arg Ala Ala Leu Met Ile Leu
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Arg Ser His Arg Arg Leu Ser Pro Pro Pro Ser Gln Cys Thr Ile Gln
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195 200 205

Ala Lys Ser Leu Tyr Gln Lys Arg Gly Ser Ser Arg His Leu Ser Asn
210 215 220

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225 230 235 240

Thr Phe Cys Val Ser Asp Phe Ser Thr Ser Asp Pro Thr Thr Glu Phe
245 250 255

Glu Lys Phe His Ala Ser Ile Arg Ile Pro Pro Phe Asp Asn Asp Leu
260 265 270

Asp His Pro Gly Glu Arg Gln Gln Ile Ser Ser Thr Arg Glu Arg Lys
 275 280 285

Ala Lys Arg Ile Leu Gly Leu Ile Leu Gly Ala Phe Ile Leu Ser Trp
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Leu Pro Phe Phe Ile Lys Glu Leu Ile Val Gly Leu Ser Ile Tyr Thr
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Val Ser Ser Glu Val Ala Asp Phe Leu Thr Trp Leu Gly Tyr Val Asn
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Val	Ser	Thr	Ser	Tyr	Val	Leu	Glu	Lys	Ser	Leu	Ser	Asp	Pro	Ser	Thr	
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Cys	Trp	Leu	Pro	Phe	Phe	Val	Lys	Glu	Leu	Val	Val	Asn	Val	Cys	Asp	
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330

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Cys Asn Gln Thr Thr Leu Gln Met Leu Leu Glu Ile Phe Val Trp Ile
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Gly Tyr Val Ser Ser Gly Val Asn Pro Leu Val Tyr Thr Leu Phe Asn
370 375 380

Lys Thr Phe Arg Asp Ala Phe Gly Arg Tyr Ile Thr Cys Asn Tyr Arg
385 390 395 400

Ala Thr Lys Ser Val Lys Thr Leu Arg Lys Arg Ser Ser Lys Ile Tyr
405 410 415

Phe Arg Asn Pro Met Ala Glu Asn Ser Lys Phe Phe Lys Lys His Gly
420 425 430

Ile Arg Asn Gly Ile Asn Pro Ala Met Tyr Gln Ser Pro Met Arg Leu
435 440 445

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<212> PRT
<213> Homo sapiens

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35 40 45

Gln Leu Arg Lys Ile Lys Thr Asn Tyr Phe Ile Val Ser Leu Ala Phe
50 55 60

Ala Asp Leu Leu Val Ser Val Leu Val Met Pro Phe Gly Ala Ile Glu
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Leu Val Gln Asp Ile Trp Ile Tyr Gly Glu Val Phe Cys Leu Val Arg
85 90 95

Thr Ser Leu Asp Val Leu Leu Thr Thr Ala Ser Ile Phe His Leu Cys
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<210> 438

<211> 1167

<212> DNA

<213> Homo sapiens

<400> 438

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<210> 439

<211> 388

<212> PRT

<213> Homo sapiens

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128

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Arg Ala Phe Leu Ile Ile Leu Cys Cys Asp Asp Glu Arg Tyr Arg Arg
325 330 335

Pro Ser Ile Leu Gly Gln Thr Val Pro Cys Ser Thr Thr Thr Ile Asn
340 345 350

Gly Ser Thr His Val Leu Arg Asp Ala Val Glu Cys Gly Gly Gln Trp
355 360 365

Glu Ser Gln Cys His Pro Pro Ala Thr Ser Pro Leu Val Ala Ala Gln
370 375 380

Pro Ser Asp Thr
385

<210> 440
<211> 1152
<212> DNA
<213> Homo sapiens

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taatgcaaaa aa 1152

<210> 441
<211> 380
<212> PRT
<213> Homo sapiens

<400> 441
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Pro Ser Ile Leu Gly Gln Thr Val Pro Cys Ser Thr Thr Thr Ile Asn
 340 345 350

Gly Ser Thr His Val Leu Ser Ser Gly Thr Glu Thr Asp Arg Arg Asn
 355 360 365

Phe Gly Ile Arg Lys Arg Arg Leu Thr Lys Pro Ser
 370 375 380

<210> 442
 <211> 1083
 <212> DNA
 <213> Homo sapiens

<400> 442
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 ctggttcaag acatctggat ttatggggag gtgttttctc ttgttcggac atctctggac 300
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 cagtcggcag accagcatag cactcatcgc atgaggacag agaccaaagc aaagaagacc 780
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<210> 443
 <211> 360
 <212> PRT
 <213> Homo sapiens

<400> 443
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 20 25 30
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 35 40 45
 Gln Leu Arg Lys Ile Lys Thr Asn Tyr Phe Ile Val Ser Leu Ala Phe
 50 55 60

Ala	Asp	Leu	Leu	Val	Ser	Val	Leu	Val	Met	Pro	Phe	Gly	Ala	Ile	Glu	65	70	75	80
Leu	Val	Gln	Asp	Ile	Trp	Ile	Tyr	Gly	Glu	Val	Phe	Cys	Leu	Val	Arg	85	90	95	
Thr	Ser	Leu	Asp	Val	Leu	Leu	Thr	Thr	Ala	Ser	Ile	Phe	His	Leu	Cys	100	105	110	
Cys	Ile	Ser	Leu	Asp	Arg	Tyr	Tyr	Ala	Ile	Cys	Cys	Gln	Pro	Leu	Val	115	120	125	
Tyr	Arg	Asn	Lys	Met	Thr	Pro	Leu	Arg	Ile	Ala	Leu	Met	Leu	Gly	Gly	130	135	140	
Cys	Trp	Val	Ile	Pro	Thr	Phe	Ile	Ser	Phe	Leu	Pro	Ile	Met	Gln	Gly	145	150	155	160
Trp	Asn	Asn	Ile	Gly	Ile	Ile	Asp	Leu	Ile	Glu	Lys	Arg	Lys	Phe	Asn	165	170	175	
Gln	Asn	Ser	Asn	Ser	Thr	Tyr	Cys	Val	Phe	Met	Val	Asn	Lys	Pro	Tyr	180	185	190	
Ala	Ile	Thr	Cys	Ser	Val	Val	Ala	Phe	Tyr	Ile	Pro	Phe	Leu	Leu	Met	195	200	205	
Val	Leu	Ala	Tyr	Tyr	Arg	Ile	Tyr	Val	Thr	Ala	Lys	Glu	His	Ala	His	210	215	220	
Gln	Ile	Gln	Met	Leu	Gln	Arg	Ala	Gly	Ala	Ser	Ser	Glu	Ser	Arg	Pro	225	230	235	240
Gln	Ser	Ala	Asp	Gln	His	Ser	Thr	His	Arg	Met	Arg	Thr	Glu	Thr	Lys	245	250	255	
Ala	Lys	Lys	Thr	Leu	Cys	Ile	Ile	Met	Gly	Cys	Phe	Cys	Leu	Cys	Trp	260	265	270	
Ala	Pro	Phe	Phe	Val	Thr	Asn	Ile	Val	Asp	Pro	Phe	Ile	Asp	Tyr	Thr	275	280	285	
Val	Pro	Gly	Gln	Val	Trp	Thr	Ala	Phe	Leu	Trp	Leu	Gly	Tyr	Ile	Asn	290	295	300	
Ser	Gly	Leu	Asn	Pro	Phe	Leu	Tyr	Ala	Phe	Leu	Asn	Lys	Ser	Phe	Arg	305	310	315	320
Arg	Ala	Phe	Leu	Ile	Ile	Leu	Cys	Cys	Asp	Asp	Glu	Arg	Tyr	Arg	Arg	325	330	335	
Pro	Ser	Ile	Leu	Gly	Gln	Thr	Val	Pro	Cys	Ser	Thr	Thr	Thr	Ile	Asn	340	345	350	
Gly	Ser	Thr	His	Val	Leu	Arg	Phe									355	360		

<210> 444
 <211> 1137
 <212> DNA
 <213> Homo sapiens

<400> 444
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<210> 445
 <211> 378
 <212> PRT
 <213> Homo sapiens

<400> 445
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 35 40 45
 Gln Leu Arg Lys Ile Lys Thr Asn Tyr Phe Ile Val Ser Leu Ala Phe
 50 55 60
 Ala Asp Leu Leu Val Ser Val Leu Val Met Pro Phe Gly Ala Ile Glu
 65 70 75 80
 Leu Val Gln Asp Ile Trp Ile Tyr Gly Glu Val Phe Cys Leu Val Arg
 85 90 95
 Thr Ser Leu Asp Val Leu Leu Thr Thr Ala Ser Ile Phe His Leu Cys
 100 105 110
 Cys Ile Ser Leu Asp Arg Tyr Tyr Ala Ile Cys Cys Gln Pro Leu Val

115					120					125					
Tyr	Arg	Asn	Lys	Met	Thr	Pro	Leu	Arg	Ile	Ala	Leu	Met	Leu	Gly	Gly
130						135					140				
Cys	Trp	Val	Ile	Pro	Thr	Phe	Ile	Ser	Phe	Leu	Pro	Ile	Met	Gln	Gly
145					150					155					160
Trp	Asn	Asn	Ile	Gly	Ile	Ile	Asp	Leu	Ile	Glu	Lys	Arg	Lys	Phe	Asn
				165					170					175	
Gln	Asn	Ser	Asn	Ser	Thr	Tyr	Cys	Val	Phe	Met	Val	Asn	Lys	Pro	Tyr
			180					185					190		
Ala	Ile	Thr	Cys	Ser	Val	Val	Ala	Phe	Tyr	Ile	Pro	Phe	Leu	Leu	Met
		195					200					205			
Val	Leu	Ala	Tyr	Tyr	Arg	Ile	Tyr	Val	Thr	Ala	Lys	Glu	His	Ala	His
	210					215					220				
Gln	Ile	Gln	Met	Leu	Gln	Arg	Ala	Gly	Ala	Ser	Ser	Glu	Ser	Arg	Pro
225					230					235					240
Gln	Ser	Ala	Asp	Gln	His	Ser	Thr	His	Arg	Met	Arg	Thr	Glu	Thr	Lys
				245					250					255	
Ala	Lys	Lys	Thr	Leu	Cys	Ile	Ile	Met	Gly	Cys	Phe	Cys	Leu	Cys	Trp
			260					265					270		
Ala	Pro	Phe	Phe	Val	Thr	Asn	Ile	Val	Asp	Pro	Phe	Ile	Asp	Tyr	Thr
		275					280					285			
Val	Pro	Gly	Gln	Val	Trp	Thr	Ala	Phe	Leu	Trp	Leu	Gly	Tyr	Ile	Asn
	290					295					300				
Ser	Gly	Leu	Asn	Pro	Phe	Leu	Tyr	Ala	Phe	Leu	Asn	Lys	Ser	Phe	Arg
305					310					315					320
Arg	Ala	Phe	Leu	Ile	Ile	Leu	Cys	Cys	Asp	Asp	Glu	Arg	Tyr	Arg	Arg
				325					330					335	
Pro	Ser	Ile	Leu	Gly	Gln	Thr	Val	Pro	Cys	Ser	Thr	Thr	Thr	Ile	Asn
			340					345					350		
Gly	Ser	Thr	His	Val	Leu	Ser	Gly	Cys	Ser	Pro	Val	Ser	Ser	Phe	Leu
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<210> 446
 <211> 1074
 <212> DNA
 <213> Homo sapiens
 <400> 446

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<210> 447
 <211> 357
 <212> PRT
 <213> Homo sapiens

<400> 447

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			20					25					30		
Ser	Pro	Leu	Leu	Ser	Val	Phe	Gly	Val	Leu	Ile	Leu	Thr	Leu	Leu	Gly
		35					40					45			
Phe	Leu	Val	Ala	Ala	Thr	Phe	Ala	Trp	Asn	Leu	Leu	Val	Leu	Ala	Thr
	50					55					60				
Ile	Leu	Arg	Val	Arg	Thr	Phe	His	Arg	Val	Pro	His	Asn	Leu	Val	Ala
65					70					75					80
Ser	Met	Ala	Val	Ser	Asp	Val	Leu	Val	Ala	Ala	Leu	Val	Met	Pro	Leu
				85					90					95	
Ser	Leu	Val	His	Glu	Leu	Ser	Gly	Arg	Arg	Trp	Gln	Leu	Gly	Arg	Arg
			100					105					110		
Leu	Cys	Gln	Leu	Trp	Ile	Ala	Cys	Asp	Val	Leu	Cys	Cys	Thr	Ala	Ser
		115					120					125			
Ile	Trp	Asn	Val	Thr	Ala	Ile	Ala	Leu	Asp	Arg	Tyr	Trp	Ser	Ile	Thr
	130					135					140				
Arg	His	Met	Glu	Tyr	Thr	Leu	Arg	Thr	Arg	Lys	Cys	Val	Ser	Asn	Val
145					150					155					160
Met	Ile	Ala	Leu	Thr	Trp	Ala	Leu	Ser	Ala	Val	Ile	Ser	Leu	Ala	Pro

005040-60592360

165										170					175				
Leu	Leu	Phe	Gly	Trp	Gly	Glu	Thr	Tyr	Ser	Glu	Gly	Ser	Glu	Glu	Cys				
			180					185					190						
Gln	Val	Ser	Arg	Glu	Pro	Ser	Tyr	Ala	Val	Phe	Ser	Thr	Val	Gly	Ala				
		195					200					205							
Phe	Tyr	Leu	Pro	Leu	Cys	Val	Val	Leu	Phe	Val	Tyr	Trp	Lys	Ile	Tyr				
	210					215					220								
Lys	Ala	Ala	Lys	Phe	Arg	Val	Gly	Ser	Arg	Lys	Thr	Asn	Ser	Val	Ser				
225					230					235					240				
Pro	Ile	Ser	Glu	Ala	Val	Glu	Val	Lys	Asp	Ser	Ala	Lys	Gln	Pro	Gln				
				245					250					255					
Met	Val	Phe	Thr	Val	Arg	His	Ala	Thr	Val	Thr	Phe	Gln	Pro	Glu	Gly				
			260					265					270						
Asp	Thr	Trp	Arg	Glu	Gln	Lys	Glu	Gln	Arg	Ala	Lys	Leu	Met	Val	Gly				
		275					280					285							
Ile	Leu	Ile	Gly	Val	Phe	Val	Leu	Cys	Trp	Ile	Pro	Phe	Phe	Leu	Thr				
	290					295					300								
Glu	Leu	Ile	Ser	Pro	Leu	Cys	Ser	Cys	Asp	Ile	Pro	Ala	Ile	Trp	Lys				
305					310					315					320				
Ser	Ile	Phe	Leu	Trp	Leu	Gly	Tyr	Ser	Asn	Ser	Phe	Phe	Asn	Pro	Leu				
				325					330					335					
Ile	Tyr	Thr	Ala	Phe	Asn	Lys	Asn	Tyr	Asn	Ser	Ala	Phe	Lys	Asn	Phe				
			340					345					350						
Phe	Ser	Arg	Gln	His															
			355																

<210> 448
<211> 1323
<212> DNA
<213> Homo sapiens

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gcggcggcca actcgtgct gatcgcgctc atctgcactc agcccgcgct gcgcaacacg 180
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ccgccggcca tgctgaacgc gctgtacggg cgctgggtgc tggcgcgcgg cctctgcctg 300
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 cctggcgagg ccaccagga cccccgctg cccaccaggg ccgctgcgcg cgtcaatttc 1260
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 tga 1323

<210> 449
 <211> 440
 <212> PRT
 <213> Homo sapiens

<400> 449

Met Val Pro Glu Pro Gly Pro Thr Ala Asn Ser Thr Pro Ala Trp Gly
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Ala Gly Pro Pro Ser Ala Pro Gly Gly Ser Gly Trp Val Ala Ala Ala
 20 25 30

Leu Cys Val Val Ile Ala Leu Thr Ala Ala Ala Asn Ser Leu Leu Ile
 35 40 45

Ala Leu Ile Cys Thr Gln Pro Ala Leu Arg Asn Thr Ser Asn Phe Phe
 50 55 60

Leu Val Ser Leu Phe Thr Ser Asp Leu Met Val Gly Leu Val Val Met
 65 70 75 80

Pro Pro Ala Met Leu Asn Ala Leu Tyr Gly Arg Trp Val Leu Ala Arg
 85 90 95

Gly Leu Cys Leu Leu Trp Thr Ala Phe Asp Val Met Cys Cys Ser Ala
 100 105 110

Ser Ile Leu Asn Leu Cys Leu Ile Ser Leu Asp Arg Tyr Leu Leu Ile
 115 120 125

Leu Ser Pro Leu Arg Tyr Lys Leu Arg Met Thr Pro Leu Arg Ala Leu
 130 135 140

Ala Leu Val Leu Gly Ala Trp Ser Leu Ala Ala Leu Ala Ser Phe Leu
 145 150 155 160

Pro Leu Leu Leu Gly Trp His Glu Leu Gly His Ala Arg Pro Pro Val
 165 170 175

Pro Gly Gln Cys Arg Leu Leu Ala Ser Leu Pro Phe Val Leu Val Ala
 180 185 190

Ser Gly Leu Thr Phe Phe Leu Pro Ser Gly Ala Ile Cys Phe Thr Tyr
 195 200 205

Cys Arg Ile Leu Leu Ala Ala Arg Lys Gln Ala Val Gln Val Ala Ser
 210 215 220

Leu Thr Thr Gly Met Ala Ser Gln Ala Ser Glu Thr Leu Gln Val Pro
 225 230 235 240

Arg Thr Pro Arg Pro Gly Val Glu Ser Ala Asp Ser Arg Arg Leu Ala
 245 250 255

Thr Lys His Ser Arg Lys Ala Leu Lys Ala Lys Leu Thr Leu Gly Ile
 260 265 270

Leu Leu Gly Met Phe Phe Val Thr Trp Leu Pro Phe Phe Val Ala Asn
 275 280 285

Ile Val Gln Ala Val Cys Asp Cys Ile Ser Pro Gly Leu Phe Asp Val
 290 295 300

Leu Thr Trp Leu Gly Tyr Cys Asn Ser Thr Met Asn Pro Ile Ile Tyr
 305 310 315 320

Pro Leu Phe Met Arg Asp Phe Lys Arg Ala Leu Gly Arg Phe Leu Pro
 325 330 335

Cys Pro Arg Cys Pro Arg Glu Arg Gln Ala Ser Leu Ala Ser Pro Ser
 340 345 350

Leu Arg Thr Ser His Ser Gly Pro Arg Pro Gly Leu Ser Leu Gln Gln
 355 360 365

Val Leu Pro Leu Pro Leu Pro Pro Asp Ser Asp Ser Asp Ser Asp Ala
 370 375 380

Gly Ser Gly Gly Ser Ser Gly Leu Arg Leu Thr Ala Gln Leu Leu Leu
 385 390 395 400

Pro Gly Glu Ala Thr Gln Asp Pro Pro Leu Pro Thr Arg Ala Ala Ala
 405 410 415

Ala Val Asn Phe Phe Asn Ile Asp Pro Ala Glu Pro Glu Leu Arg Pro
 420 425 430

His Pro Leu Gly Ile Pro Thr Asn
 435 440

<210> 450
 <211> 1379
 <212> DNA
 <213> Homo sapiens

<400> 450
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 gcgggctcct gggcgccgca cctgctgagc gaggtgacag ccagcccggc gccacactgg 180
 gacgcgcccc cggacaatgc ctccggctgt ggggaacaga tcaactacg cagagtcgag 240

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aaagttgtga tgggtccat cctgacgtc atcacgtgc tgacgatgc gggcaactgc 300
ctgggtgtga tctccgtgtg cttcgtcaag aagctccgcc agccctccaa ctacctgatc 360
gtgtccctgg cgctggcga cctctcgggtg gctgtggcgg tcatgccctt cgtcagcgtc 420
accgacctca tcgggggcaa gtggatcttt ggacactttt tctgtaatgt cttcatcgcc 480
atggacgtca tgtgtgtcac ggcctcgatc atgacctgtg gcgtgatcag cattgacagg 540
taccttgga tcacaaggcc cctcacatac cctgtgaggc agaattggaa atgcatggcg 600
aagatgattc tctccgtctg gcttctctcc gcctccatca ccttacctcc actctttgga 660
tgggtcaga atgtaaata tgataagggtg tgcttgatca gccaggactt tggctatacg 720
atttactcta ccgcagtggc attttatata cccatgtccg tcatgctttt catgtactac 780
cagatttaca aggctgccag gaagagtgtc gccaaacaca agtttcctgg cttccctcga 840
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gagtgtgcaa acctttcgag actcctcaag catgaaagga aaaacatctc catctttaag 960
cgagaacaga aagcaaagac caccctgggg atcatcgctg gggcctttac cgtgtgctgg 1020
ctgccatttt tctcctctc gacagccaga cccttcatct gtggcacttc ctgcagctgc 1080
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tgccagtacc ggaatatcaa ccggaagctc tcagctgcag gcatgcatga agccctgaag 1260
cttgcgtgaga ggccagagag acctgagttt gtgctacaaa atgctgacta ctgtagaaaa 1320
aaaggtcatg attcatgatt gaaagcagaa caatggagag gaattcgata tcaagctta 1379

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<210> 451
 <211> 445
 <212> PRT
 <213> Homo sapiens

<400> 451

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Arg	Ser	Phe	Leu	Leu	Pro	Glu	Val	Gly	Arg	Gly	Leu	Pro	Asp	Leu	Ser
			20					25					30		
Pro	Asp	Gly	Gly	Ala	Asp	Pro	Val	Ala	Gly	Ser	Trp	Ala	Pro	His	Leu
		35					40					45			
Leu	Ser	Glu	Val	Thr	Ala	Ser	Pro	Ala	Pro	Thr	Trp	Asp	Ala	Pro	Pro
	50					55					60				
Asp	Asn	Ala	Ser	Gly	Cys	Gly	Glu	Gln	Ile	Asn	Tyr	Gly	Arg	Val	Glu
65					70					75					80
Lys	Val	Val	Ile	Gly	Ser	Ile	Leu	Thr	Leu	Ile	Thr	Leu	Leu	Thr	Ile
			85					90						95	
Ala	Gly	Asn	Cys	Leu	Val	Val	Ile	Ser	Val	Cys	Phe	Val	Lys	Lys	Leu
		100						105					110		
Arg	Gln	Pro	Ser	Asn	Tyr	Leu	Ile	Val	Ser	Leu	Ala	Leu	Ala	Asp	Leu
		115					120					125			
Ser	Val	Ala	Val	Ala	Val	Met	Pro	Phe	Val	Ser	Val	Thr	Asp	Leu	Ile
	130					135						140			
Gly	Gly	Lys	Trp	Ile	Phe	Gly	His	Phe	Phe	Cys	Asn	Val	Phe	Ile	Ala
145					150					155					160

005040-0052560

Met	Asp	Val	Met	Cys	Cys	Thr	Ala	Ser	Ile	Met	Thr	Leu	Cys	Val	Ile	
				165					170					175		
Ser	Ile	Asp	Arg	Tyr	Leu	Gly	Ile	Thr	Arg	Pro	Leu	Thr	Tyr	Pro	Val	
			180					185					190			
Arg	Gln	Asn	Gly	Lys	Cys	Met	Ala	Lys	Met	Ile	Leu	Ser	Val	Trp	Leu	
		195					200					205				
Leu	Ser	Ala	Ser	Ile	Thr	Leu	Pro	Pro	Leu	Phe	Gly	Trp	Ala	Gln	Asn	
	210					215					220					
Val	Asn	Asp	Asp	Lys	Val	Cys	Leu	Ile	Ser	Gln	Asp	Phe	Gly	Tyr	Thr	
225					230					235					240	
Ile	Tyr	Ser	Thr	Ala	Val	Ala	Phe	Tyr	Ile	Pro	Met	Ser	Val	Met	Leu	
				245					250					255		
Phe	Met	Tyr	Tyr	Gln	Ile	Tyr	Lys	Ala	Ala	Arg	Lys	Ser	Ala	Ala	Lys	
			260					265					270			
His	Lys	Phe	Pro	Gly	Phe	Pro	Arg	Val	Glu	Pro	Asp	Ser	Val	Ile	Ala	
		275					280					285				
Leu	Asn	Gly	Ile	Val	Lys	Leu	Gln	Lys	Glu	Val	Glu	Glu	Cys	Ala	Asn	
	290					295					300					
Leu	Ser	Arg	Leu	Leu	Lys	His	Glu	Arg	Lys	Asn	Ile	Ser	Ile	Phe	Lys	
305					310					315					320	
Arg	Glu	Gln	Lys	Ala	Lys	Thr	Thr	Leu	Gly	Ile	Ile	Val	Gly	Ala	Phe	
				325					330					335		
Thr	Val	Cys	Trp	Leu	Pro	Phe	Phe	Leu	Leu	Ser	Thr	Ala	Arg	Pro	Phe	
			340					345					350			
Ile	Cys	Gly	Thr	Ser	Cys	Ser	Cys	Ile	Pro	Leu	Trp	Val	Glu	Arg	Thr	
		355					360					365				
Phe	Leu	Trp	Leu	Gly	Tyr	Ala	Asn	Ser	Leu	Ile	Asn	Pro	Phe	Ile	Tyr	
	370					375					380					
Ala	Phe	Phe	Asn	Arg	Asp	Leu	Arg	Thr	Thr	Tyr	Arg	Ser	Leu	Leu	Gln	
385					390					395					400	
Cys	Gln	Tyr	Arg	Asn	Ile	Asn	Arg	Lys	Leu	Ser	Ala	Ala	Gly	Met	His	
				405					410					415		
Glu	Ala	Leu	Lys	Leu	Ala	Glu	Arg	Pro	Glu	Arg	Pro	Glu	Phe	Val	Leu	
			420					425					430			
Gln	Asn	Ala	Asp	Tyr	Cys	Arg	Lys	Lys	Gly	His	Asp	Ser				
		435					440					445				

<210> 452
<211> 1257

<212> DNA
<213> Homo sapiens

<400> 452
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ccaccgaggg acgtgcgcaa cgaggagctg gccaaactgg agatcgccgt gctggcgggtg 180
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cgcaagacgt cccgcatgca cctcttcate cgacacctca gcctggccga cctggccgtg 300
gcattcttcc aggtgctgcc gcaaattgtgc tgggacatca cctaccgctt ccgcggcccc 360
gactggctgt gccgcgtggg gaagcacctg caggtgttcg gcatgtttgc gtcggcctac 420
atgctggtag tcatgacagc cgaccgctac atcgcggtgt gccaccgct caagactctg 480
caacagcccg cgcgcgcgtc gcgcctcatg atcgcgccg cctgggtgct gagcttcgtg 540
ctgagcacgc cgcagtactt cgtcttctcc atgatcgagg tgaacaatgt caccaaggcc 600
cgcgactgct gggccacctt catccagccc tggggttctc gtgcctacgt gacctggatg 660
acgggcggca tctttgtggc gcccggtggc atcttgggta cctgctacgg ctcatctgc 720
tacaacatct ggtgcaacgt ccgcgggaag acggcgctgc gccagagcaa ggggtgcagag 780
caagcgggtg tggccttcca aaaggggttc ctgctcgcac cctgtgtcag cagcgtgaag 840
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agctgctgta atccctggat atacatgttt tttagtggcc atctccttca agactgtgtt 1080
caaagcttcc catgctgcc aacatgaag gaaaaattca acaaagaaga tactgacagt 1140
atgagcagaa gacagacttt ttattctaac aatcgaagcc caacaaacag tacgggtatg 1200
tggaaggact cgctaaatc ttccaagtcc atcaaattca ttctgtttc aacttga 1257

<210> 453
<211> 418
<212> PRT
<213> Homo sapiens

<400> 453
Met Arg Leu Ser Ala Gly Pro Asp Ala Gly Pro Ser Gly Asn Ser Ser
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Pro Trp Trp Pro Leu Ala Thr Gly Ala Gly Asn Thr Ser Arg Glu Ala
20 25 30
Glu Ala Leu Gly Glu Gly Asn Gly Pro Pro Arg Asp Val Arg Asn Glu
35 40 45
Glu Leu Ala Lys Leu Glu Ile Ala Val Leu Ala Val Thr Phe Ala Val
50 55 60
Ala Val Leu Gly Asn Ser Ser Val Leu Leu Ala Leu His Arg Thr Pro
65 70 75 80
Arg Lys Thr Ser Arg Met His Leu Phe Ile Arg His Leu Ser Leu Ala
85 90 95
Asp Leu Ala Val Ala Phe Phe Gln Val Leu Pro Gln Met Cys Trp Asp
100 105 110
Ile Thr Tyr Arg Phe Arg Gly Pro Asp Trp Leu Cys Arg Val Val Lys
115 120 125

[illegible]

<210> 454
 <211> 1275
 <212> DNA
 <213> Homo sapiens

<400> 454
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 ctggccactg tcctggtgct ggcgaccggg ggcaacctgg ctgtgctgct gaccctgggc 180
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 ctggccgtgg cgctcttcca ggtgctgcca cagctgctgt gggacatcac ctaccgcttc 300
 cagggccccc acctcctgtg cagggccgctc aagtacctgc aggtgctcag catgtttgcc 360
 tccacctaca tgctgctggc catgacgctg gaccgctacc tggctgtctg tcacccctg 420
 cgcagcctcc agcagccagg ccagtcacc tacctgctca tcgctgctcc ctggctgctg 480
 gccgccatct tcagcctccc tcaagtcttc attttttccc tgcgggaggt gatccagggc 540
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 aagatgacct ttgtcatcgt gctggcctac atcgcttgct gggctccctt cttcagtgtc 900
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 acccgctcca gctgcccggc caccctcagc ctacgctca gcctaaccct cagtgggagg 1200
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 accatcatct tttag 1275

<210> 455
 <211> 424
 <212> PRT
 <213> Homo sapiens

<400> 455
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 Leu Ser Ala Pro Asn Ala Thr Thr Pro Trp Leu Gly Arg Asp Glu Glu
 20 25 30
 Leu Ala Lys Val Glu Ile Gly Val Leu Ala Thr Val Leu Val Leu Ala
 35 40 45
 Thr Gly Gly Asn Leu Ala Val Leu Leu Thr Leu Gly Gln Leu Gly Arg
 50 55 60
 Lys Arg Ser Arg Met His Leu Phe Val Leu His Leu Ala Leu Thr Asp
 65 70 75 80
 Leu Ala Val Ala Leu Phe Gln Val Leu Pro Gln Leu Leu Trp Asp Ile
 85 90 95
 Thr Tyr Arg Phe Gln Gly Pro Asp Leu Leu Cys Arg Ala Val Lys Tyr
 100 105 110

Leu	Gln	Val	Leu	Ser	Met	Phe	Ala	Ser	Thr	Tyr	Met	Leu	Leu	Ala	Met
	115						120					125			
Thr	Leu	Asp	Arg	Tyr	Leu	Ala	Val	Cys	His	Pro	Leu	Arg	Ser	Leu	Gln
	130					135					140				
Gln	Pro	Gly	Gln	Ser	Thr	Tyr	Leu	Leu	Ile	Ala	Ala	Pro	Trp	Leu	Leu
145					150					155					160
Ala	Ala	Ile	Phe	Ser	Leu	Pro	Gln	Val	Phe	Ile	Phe	Ser	Leu	Arg	Glu
				165					170					175	
Val	Ile	Gln	Gly	Ser	Gly	Val	Leu	Asp	Cys	Trp	Ala	Asp	Phe	Gly	Phe
			180					185					190		
Pro	Trp	Gly	Pro	Arg	Ala	Tyr	Leu	Thr	Trp	Thr	Thr	Leu	Ala	Ile	Phe
		195					200					205			
Val	Leu	Pro	Val	Thr	Met	Leu	Thr	Ala	Cys	Tyr	Ser	Leu	Ile	Cys	His
	210					215					220				
Glu	Ile	Cys	Lys	Asn	Leu	Lys	Val	Lys	Thr	Gln	Ala	Trp	Arg	Val	Gly
225					230					235					240
Gly	Gly	Gly	Trp	Arg	Thr	Trp	Asp	Arg	Pro	Ser	Pro	Ser	Thr	Leu	Ala
				245					250					255	
Ala	Thr	Thr	Arg	Gly	Leu	Pro	Ser	Arg	Val	Ser	Ser	Ile	Asn	Thr	Ile
			260					265					270		
Ser	Arg	Ala	Lys	Ile	Arg	Thr	Lys	Lys	Met	Thr	Phe	Val	Ile	Val	Leu
		275					280					285			
Ala	Tyr	Ile	Ala	Cys	Trp	Ala	Pro	Phe	Phe	Ser	Val	Gln	Met	Trp	Ser
	290					295					300				
Val	Trp	Asp	Lys	Asn	Ala	Pro	Asp	Glu	Asp	Ser	Thr	Asn	Val	Ala	Phe
305					310					315					320
Thr	Ile	Ser	Met	Leu	Leu	Gly	Asn	Leu	Asn	Ser	Cys	Cys	Asn	Pro	Trp
			325					330						335	
Ile	Tyr	Met	Gly	Phe	Asn	Ser	His	Leu	Leu	Pro	Arg	Pro	Leu	Arg	His
		340						345					350		
Leu	Ala	Cys	Cys	Gly	Gly	Pro	Gln	Pro	Arg	Met	Arg	Arg	Arg	Leu	Ser
		355					360					365			
Asp	Gly	Ser	Leu	Ser	Ser	Arg	His	Thr	Thr	Leu	Leu	Thr	Arg	Ser	Ser
	370					375					380				
Cys	Pro	Ala	Thr	Leu	Ser	Leu	Ser	Leu	Ser	Leu	Thr	Leu	Ser	Gly	Arg
385					390					395					400
Pro	Arg	Pro	Glu	Glu	Ser	Pro	Arg	Asp	Leu	Glu	Leu	Ala	Asp	Gly	Glu
			405						410					415	

Gly Thr Ala Glu Thr Ile Ile Phe
420

<210> 456
<211> 1116
<212> DNA
<213> Homo sapiens

<400> 456
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ctggcgctgc tctccatagt ctttgtggct gtggccctga gcaatggcct ggtgctggcg 180
gccctagctc ggcggggccg gcggggccac tgggcaccca tacacgtctt cattggccac 240
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gccaccgacc gcttccgtgg gccagatgcc ctgtgtcggg ccgtgaagta tctgcagatg 360
gtgggcatgt atgcctcctc ctacatgac ctggccatga cgctggaccg ccaccgtgcc 420
atctgccgtc ccatgctggc gtaccgccat ggaagtgggg ctactggaa ccggccgggtg 480
ctagtggctt gggccttctc gctccttctc agcctgcccc agctcttcat cttcgcccag 540
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cacgtgtcag cagctgtggc caagactaag aggatgacgc tagtgattgt ggtcgtctat 840
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cctctggaag gggcgccctt tgtgtactc atgttgctgg ccagcctcaa cagctgcacc 960
aacccttgga tctatgcac tttcagcagc agcgtgtcct cagagctgcg aagcttgctc 1020
tgctgtgccc ggggacgcac cccaccagc ctgggtcccc aagatgagtc ctgcaccacc 1080
gccagctcct ccctggccaa ggacatttca tcgtga 1116

<210> 457
<211> 371
<212> PRT
<213> Homo sapiens

<400> 457
Met Leu Met Ala Ser Thr Thr Ser Ala Val Pro Gly His Pro Ser Leu
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Pro Ser Leu Pro Ser Asn Ser Ser Gln Glu Arg Pro Leu Asp Thr Arg
20 25 30
Asp Pro Leu Leu Ala Arg Ala Glu Leu Ala Leu Leu Ser Ile Val Phe
35 40 45
Val Ala Val Ala Leu Ser Asn Gly Leu Val Leu Ala Ala Leu Ala Arg
50 55 60
Arg Gly Arg Arg Gly His Trp Ala Pro Ile His Val Phe Ile Gly His
65 70 75 80
Leu Cys Leu Ala Asp Leu Ala Val Ala Leu Phe Gln Val Leu Pro Gln
85 90 95
Leu Ala Trp Lys Ala Thr Asp Arg Phe Arg Gly Pro Asp Ala Leu Cys

100	105	110
Arg Ala Val Lys Tyr Leu Gln Met Val Gly Met Tyr Ala Ser Ser Tyr		
115	120	125
Met Ile Leu Ala Met Thr Leu Asp Arg His Arg Ala Ile Cys Arg Pro		
130	135	140
Met Leu Ala Tyr Arg His Gly Ser Gly Ala His Trp Asn Arg Pro Val		
145	150	155
Leu Val Ala Trp Ala Phe Ser Leu Leu Leu Ser Leu Pro Gln Leu Phe		
165	170	175
Ile Phe Ala Gln Arg Asn Val Glu Gly Gly Ser Gly Val Thr Asp Cys		
180	185	190
Trp Ala Cys Phe Ala Glu Pro Trp Gly Arg Arg Thr Tyr Val Thr Trp		
195	200	205
Ile Ala Leu Met Val Phe Val Ala Pro Thr Leu Gly Ile Ala Ala Cys		
210	215	220
Gln Val Leu Ile Phe Arg Glu Ile His Ala Ser Leu Val Pro Gly Pro		
225	230	235
Ser Glu Arg Pro Gly Gly Arg Arg Arg Gly Arg Arg Thr Gly Ser Pro		
245	250	255
Gly Glu Gly Ala His Val Ser Ala Ala Val Ala Lys Thr Lys Arg Met		
260	265	270
Thr Leu Val Ile Val Val Val Tyr Val Leu Cys Trp Ala Pro Phe Phe		
275	280	285
Leu Val Gln Leu Trp Ala Ala Trp Asp Pro Glu Ala Pro Leu Glu Gly		
290	295	300
Ala Pro Phe Val Leu Leu Met Leu Leu Ala Ser Leu Asn Ser Cys Thr		
305	310	315
Asn Pro Trp Ile Tyr Ala Ser Phe Ser Ser Ser Val Ser Ser Glu Leu		
325	330	335
Arg Ser Leu Leu Cys Cys Ala Arg Gly Arg Thr Pro Pro Ser Leu Gly		
340	345	350
Pro Gln Asp Glu Ser Cys Thr Thr Ala Ser Ser Ser Leu Ala Lys Asp		
355	360	365
Thr Ser Ser		
370		

<210> 458
 <211> 1200
 <212> DNA

<213> Homo sapiens

<400> 458

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tctccaggaa tagaagcatt gtgtgccatc tatattactt atgctgtgat catttcagtg 180
ggcatccttg gaaatgctat tctcatcaaa gtctttttca agaccaaata catgcaaaca 240
gttccaaata ttttcatcac cagcctgggt tttggagatc ttttacttct gctaacttgt 300
gtgccagtgg atgcaactca ctaccttgca gaaggatggc tgttcggaag aattggttgt 360
aagggtgctct ctttcatccg gctcacttct gttggtgtgt cagtgttcac attaacaatt 420
ctcagcgctg acagatacaa ggcagttgtg aagccacttg agcgacagcc ctccaatgcc 480
atcctgaaga cttgtgtaaa agctggctgc gtctggatcg tgtctatgat atttgctcta 540
cctgaggcta ttttttcaaa tgtatacact tttcgagatc ccaataaaaa tatgacattt 600
gaatcatgta cctcttatcc tgtctctaag aagctcttgc aagaaatata ttctctgctg 660
tgcttcttag tgttctacat tattccactc tctattatct ctgtctacta ttccttgatt 720
gctaggaccc tttacaaaag caccctgaac atacctactg aggaacaaag ccatgcccg 780
aagcagattg aatcccgaaa gagaattaaa agaacggat tgggtgttgtt ggctctgtt 840
gccctctgct ggttgccaaa tcacctctg tacctctacc attcattcac ttctcaaacc 900
tatgtagacc cctctgccat gcatttcatt ttcaccattt tctctcgggt tttggctttc 960
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tttaaagctc agttgttctg ttgcaaggcg gagcggcctg agcctcctgt tgctgacacc 1080
tctcttacca ccctggctgt gatgggaacg gtcccgggca ctgggagcat acagatgtct 1140
gaaattagtg tgacctcggt cactgggtgt agtgtgaagc aggcagagga cagattctag 1200
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<210> 459

<211> 399

<212> PRT

<213> Homo sapiens

<400> 459

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Met Ala Gln Arg Gln Pro His Ser Pro Asn Gln Thr Leu Ile Ser Ile
  1                      5                      10                      15

Thr Asn Asp Thr Glu Ser Ser Ser Ser Val Val Ser Asn Asp Asn Thr
      20                      25                      30

Asn Lys Gly Trp Ser Gly Asp Asn Ser Pro Gly Ile Glu Ala Leu Cys
      35                      40                      45

Ala Ile Tyr Ile Thr Tyr Ala Val Ile Ile Ser Val Gly Ile Leu Gly
      50                      55                      60

Asn Ala Ile Leu Ile Lys Val Phe Phe Lys Thr Lys Ser Met Gln Thr
      65                      70                      75                      80

Val Pro Asn Ile Phe Ile Thr Ser Leu Ala Phe Gly Asp Leu Leu Leu
      85                      90                      95

Leu Leu Thr Cys Val Pro Val Asp Ala Thr His Tyr Leu Ala Glu Gly
      100                      105                      110

Trp Leu Phe Gly Arg Ile Gly Cys Lys Val Leu Ser Phe Ile Arg Leu
      115                      120                      125

Thr Ser Val Gly Val Ser Val Phe Thr Leu Thr Ile Leu Ser Ala Asp
      130                      135                      140
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Arg	Tyr	Lys	Ala	Val	Val	Lys	Pro	Leu	Glu	Arg	Gln	Pro	Ser	Asn	Ala	145	150	155	160
Ile	Leu	Lys	Thr	Cys	Val	Lys	Ala	Gly	Cys	Val	Trp	Ile	Val	Ser	Met	165	170	175	
Ile	Phe	Ala	Leu	Pro	Glu	Ala	Ile	Phe	Ser	Asn	Val	Tyr	Thr	Phe	Arg	180	185	190	
Asp	Pro	Asn	Lys	Asn	Met	Thr	Phe	Glu	Ser	Cys	Thr	Ser	Tyr	Pro	Val	195	200	205	
Ser	Lys	Lys	Leu	Leu	Gln	Glu	Ile	His	Ser	Leu	Leu	Cys	Phe	Leu	Val	210	215	220	
Phe	Tyr	Ile	Ile	Pro	Leu	Ser	Ile	Ile	Ser	Val	Tyr	Tyr	Ser	Leu	Ile	225	230	235	240
Ala	Arg	Thr	Leu	Tyr	Lys	Ser	Thr	Leu	Asn	Ile	Pro	Thr	Glu	Glu	Gln	245	250	255	
Ser	His	Ala	Arg	Lys	Gln	Ile	Glu	Ser	Arg	Lys	Arg	Ile	Lys	Arg	Thr	260	265	270	
Val	Leu	Val	Leu	Val	Ala	Leu	Phe	Ala	Leu	Cys	Trp	Leu	Pro	Asn	His	275	280	285	
Leu	Leu	Tyr	Leu	Tyr	His	Ser	Phe	Thr	Ser	Gln	Thr	Tyr	Val	Asp	Pro	290	295	300	
Ser	Ala	Met	His	Phe	Ile	Phe	Thr	Ile	Phe	Ser	Arg	Val	Leu	Ala	Phe	305	310	315	320
Ser	Asn	Ser	Cys	Val	Asn	Pro	Phe	Ala	Leu	Tyr	Trp	Leu	Ser	Lys	Ser	325	330	335	
Phe	Gln	Lys	His	Phe	Lys	Ala	Gln	Leu	Phe	Cys	Cys	Lys	Ala	Glu	Arg	340	345	350	
Pro	Glu	Pro	Pro	Val	Ala	Asp	Thr	Ser	Leu	Thr	Thr	Leu	Ala	Val	Met	355	360	365	
Gly	Thr	Val	Pro	Gly	Thr	Gly	Ser	Ile	Gln	Met	Ser	Glu	Ile	Ser	Val	370	375	380	
Thr	Ser	Phe	Thr	Gly	Cys	Ser	Val	Lys	Gln	Ala	Glu	Asp	Arg	Phe		385	390	395	

<210> 460
 <211> 1062
 <212> DNA
 <213> Homo sapiens

<400> 460
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ccgacattta tcattctccat ctgtttcttc ggctctctag ggaacctttt tgtcctgttg 180
gtcttctctc tgccccggcg gcaactgaac gtggcagaaa tctacctggc caacctggca 240
gcctctgata tgggtgtttgt cttggggcttg ccttctctggg cagagaatat ctggaaccag 300
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caccctatgg ccagccggag gcagcagcgg cggaggcagg cccgggtcac ctgctgtctc 480
atctgggttg tggggggcct cttgagcatc cccacattcc tgctgcatc catccaagcc 540
gtcccagatc tgaacatcac cgctgcac cctgctctcc cccatgaggc ctggcacttt 600
gcaaggattg tggagttaaa tattctgggt ttctctctac cactggctgc gatcgtcttc 660
ttcaactacc acatctctggc ctccctgcga acgcgggagg aggtcagcag gacaagggtgc 720
ggggggccgca aggatagcaa gaccaaagcg ctgatcctca cgctcgtggt tgccttctctg 780
gtctgctggg ccccttacca cttctttgcc ttcttggaat tcttattcca ggtgcaagca 840
gtccgaggct gcttttggga ggacttcatt gacctgggccc tgcaattggc caacttcttt 900
gccttcacta acagctccct gaatccagta atttatgtct ttgtgggccg gctcttcagg 960
accaaggtct ggggaacttta taaacaatgc acccctaaaa gtcttgctcc aatatcttca 1020
tcccatagga aagaaatctt ccaacttttc tggcggaatt aa 1062

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<210> 461
 <211> 353
 <212> PRT
 <213> Homo sapiens

<400> 461

Met	Ala	Ser	Ser	Trp	Pro	Pro	Leu	Glu	Leu	Gln	Ser	Ser	Asn	Gln	Ser
1				5					10					15	
Gln	Leu	Phe	Pro	Gln	Asn	Ala	Thr	Ala	Cys	Asp	Asn	Ala	Pro	Glu	Ala
			20					25					30		
Trp	Asp	Leu	Leu	His	Arg	Val	Leu	Pro	Thr	Phe	Ile	Ile	Ser	Ile	Cys
		35					40					45			
Phe	Phe	Gly	Leu	Leu	Gly	Asn	Leu	Phe	Val	Leu	Leu	Val	Phe	Leu	Leu
	50					55					60				
Pro	Arg	Arg	Gln	Leu	Asn	Val	Ala	Glu	Ile	Tyr	Leu	Ala	Asn	Leu	Ala
	65				70					75					80
Ala	Ser	Asp	Leu	Val	Phe	Val	Leu	Gly	Leu	Pro	Phe	Trp	Ala	Glu	Asn
				85					90					95	
Ile	Trp	Asn	Gln	Phe	Asn	Trp	Pro	Phe	Gly	Ala	Leu	Leu	Cys	Arg	Val
		100						105					110		
Ile	Asn	Gly	Val	Ile	Lys	Ala	Asn	Leu	Phe	Ile	Ser	Ile	Phe	Leu	Val
	115						120					125			
Val	Ala	Ile	Ser	Gln	Asp	Arg	Tyr	Arg	Val	Leu	Val	His	Pro	Met	Ala
	130					135					140				
Ser	Arg	Arg	Gln	Gln	Arg	Arg	Arg	Gln	Ala	Arg	Val	Thr	Cys	Val	Leu
145				150					155						160
Ile	Trp	Val	Val	Gly	Gly	Leu	Leu	Ser	Ile	Pro	Thr	Phe	Leu	Leu	Arg
				165					170					175	

Ser Ile Gln Ala Val Pro Asp Leu Asn Ile Thr Ala Cys Ile Leu Leu
180 185 190

Leu Pro His Glu Ala Trp His Phe Ala Arg Ile Val Glu Leu Asn Ile
195 200 205

Leu Gly Phe Leu Leu Pro Leu Ala Ala Ile Val Phe Phe Asn Tyr His
210 215 220

Ile Leu Ala Ser Leu Arg Thr Arg Glu Glu Val Ser Arg Thr Arg Cys
225 230 235 240

Gly Gly Arg Lys Asp Ser Lys Thr Lys Ala Leu Ile Leu Thr Leu Val
245 250 255

Val Ala Phe Leu Val Cys Trp Ala Pro Tyr His Phe Phe Ala Phe Leu
260 265 270

Glu Phe Leu Phe Gln Val Gln Ala Val Arg Gly Cys Phe Trp Glu Asp
275 280 285

Phe Ile Asp Leu Gly Leu Gln Leu Ala Asn Phe Phe Ala Phe Thr Asn
290 295 300

Ser Ser Leu Asn Pro Val Ile Tyr Val Phe Val Gly Arg Leu Phe Arg
305 310 315 320

Thr Lys Val Trp Glu Leu Tyr Lys Gln Cys Thr Pro Lys Ser Leu Ala
325 330 335

Pro Ile Ser Ser Ser His Arg Lys Glu Ile Phe Gln Leu Phe Trp Arg
340 345 350

Asn

<210> 462
<211> 1176
<212> DNA
<213> Homo sapiens

<400> 462
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acctttgccc agagcaaag cccccaagt gagtggtg gctggctcaa caccatccag 180
cccccttcc tctgggtgct gttcgtgctg gccaccctag agaacatctt tgtcctcagc 240
gtcttctgcc tgcacaagag cagctgcacg gtggcagaga tctacctggg gaacctggcc 300
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ctgtacagca gcatctgttt cctgatgctg gtgagcatcg accgctacct ggccctgggtg 480
aaaaccatgt ccatgggccc gatgcgcggc gtgcgctggg ccaagctcta cagcttggtg 540
atctgggggt gtacgctgct cctgagctca cccatgctgg tgttcggac catgaaggag 600
tacagcgatg agggccacaa cgtcaccgct tgtgtcatca gctaccatc cctcatctgg 660
gaagtgttca ccaacatgct cctgaatgtc gtgggcttcc tgctgccctt gagtgtcatc 720
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gagatccaga cggagaggag ggccaaggtg ctagtcttgg ttgtgctgct gctattcatc 840
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ctctccagct gccaggacga gcgcatcatc gatgtaatca cacagatcgc ctccttcatg 960
gcctacagca acagctgcct caaccactg gtgtacgtga tcgtgggcaa gcgcttccga 1020
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cacaaactgc aggactgggc agggagcaga cagtga 1176

<210> 463
<211> 391
<212> PRT
<213> Homo sapiens

<400> 463
Met Phe Ser Pro Trp Lys Ile Ser Met Phe Leu Ser Val Arg Glu Asp
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Ser Val Pro Thr Thr Ala Ser Phe Ser Ala Asp Met Leu Asn Val Thr
20 25 30
Leu Gln Gly Pro Thr Leu Asn Gly Thr Phe Ala Gln Ser Lys Cys Pro
35 40 45
Gln Val Glu Trp Leu Gly Trp Leu Asn Thr Ile Gln Pro Pro Phe Leu
50 55 60
Trp Val Leu Phe Val Leu Ala Thr Leu Glu Asn Ile Phe Val Leu Ser
65 70 75 80
Val Phe Cys Leu His Lys Ser Ser Cys Thr Val Ala Glu Ile Tyr Leu
85 90 95
Gly Asn Leu Ala Ala Ala Asp Leu Ile Leu Ala Cys Gly Leu Pro Phe
100 105 110
Trp Ala Ile Thr Ile Ser Asn Asn Phe Asp Trp Leu Phe Gly Glu Thr
115 120 125
Leu Cys Arg Val Val Asn Ala Ile Ile Ser Met Asn Leu Tyr Ser Ser
130 135 140
Ile Cys Phe Leu Met Leu Val Ser Ile Asp Arg Tyr Leu Ala Leu Val
145 150 155 160
Lys Thr Met Ser Met Gly Arg Met Arg Gly Val Arg Trp Ala Lys Leu
165 170 175
Tyr Ser Leu Val Ile Trp Gly Cys Thr Leu Leu Leu Ser Ser Pro Met
180 185 190
Leu Val Phe Arg Thr Met Lys Glu Tyr Ser Asp Glu Gly His Asn Val
195 200 205
Thr Ala Cys Val Ile Ser Tyr Pro Ser Leu Ile Trp Glu Val Phe Thr
210 215 220

Asn Met Leu Leu Asn Val Val Gly Phe Leu Leu Pro Leu Ser Val Ile
 225 230 235 240
 Thr Phe Cys Thr Met Gln Ile Met Gln Val Leu Arg Asn Asn Glu Met
 245 250 255
 Gln Lys Phe Lys Glu Ile Gln Thr Glu Arg Arg Ala Lys Val Leu Val
 260 265 270
 Leu Val Val Leu Leu Leu Phe Ile Ile Cys Trp Leu Pro Phe Gln Ile
 275 280 285
 Ser Thr Phe Leu Asp Thr Leu His Arg Leu Gly Ile Leu Ser Ser Cys
 290 295 300
 Gln Asp Glu Arg Ile Ile Asp Val Ile Thr Gln Ile Ala Ser Phe Met
 305 310 315 320
 Ala Tyr Ser Asn Ser Cys Leu Asn Pro Leu Val Tyr Val Ile Val Gly
 325 330 335
 Lys Arg Phe Arg Lys Lys Ser Trp Glu Val Tyr Gln Gly Val Cys Gln
 340 345 350
 Lys Gly Gly Cys Arg Ser Glu Pro Ile Gln Met Glu Asn Ser Met Gly
 355 360 365
 Thr Leu Arg Thr Ser Ile Ser Val Glu Arg Gln Ile His Lys Leu Gln
 370 375 380
 Asp Trp Ala Gly Ser Arg Gln
 385 390

<210> 464
 <211> 1449
 <212> DNA
 <213> Homo sapiens

<400> 464
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 aatgggctgg tgctgtgggt ggctggcctg aagatgcagc ggacagtga cacaatttgg 180
 ttctccacc tcaccttggc ggacctctc tgctgcctct ccttgccctt ctgctggct 240
 cacttggtc tccaggga gtggccctac ggcagggtcc tatgcaagct catccctcc 300
 atcattgtcc tcaacatgtt tgccagtgtc ttctgtctta ctgccattag cctggatgc 360
 tgtcttgtgg tattcaagcc aatctggtgt cagaatcatc gcaatgtagg gatggcctgc 420
 tctatctgtg gatgtatctg ggtggtggct tgtgtgatgt gcattcctgt gttcgtgtac 480
 cgggaaatct tctactacaga caaccataat agatgtggct acaaatttgg tctctccagc 540
 tcattagatt atccagactt ttatggagat ccactagaaa acaggtctct tgaaaacatt 600
 gttcagccgc ctggagaaat gaatgatagg ttagatcctt cctctttcca aacaaatgat 660
 catccttga cagtcccccac tgtcttccaa cctcaaaccat ttcaaagacc ttctgcagat 720
 tcactcccta ggggttctgc taggttaaca agtcaaaatc tgtattctaa tgtatttaaa 780
 cctgctgatg tgggtctacc taaaatcccc agtgggtttc ctattgaaga tcacgaaacc 840
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 tctagcaatt ccttctacga gtctgagcta ccacaagggt tccaggatta ttacaattta 960
 ggccaattca cagatgacga tcaagtgcc acaccctcg tggcaataac gatcactagg 1020

ctagtgggtgg gtttctctgct gccctctgtt atcatgatag cctggttacag cttcattgtc 1080
 ttccgaatgc aaaggggccc cttcgccaag tctcagagca aaaccaagcg agtggccgtg 1140
 gtgggtgggtg ctgtctttct tgtctgctgg actccatacc acatttttgg agtcctgtca 1200
 ttgcttactg acccagaaac tcccttgggg aaaactctga tgtcctggga tcatgtatgc 1260
 attgctctag catctgcca tagttgcttt aatcccttcc tttatgccct cttggggaaa 1320
 gatttttagga agaaagcaag gcagtccatt cagggaattc tggaggcagc cttcagttag 1380
 gagctcacac gttccacca ctgtccctca aacaatgtca tttcagaaag aaatagtaca 1440
 actgtgtga 1449

<210> 465
 <211> 482
 <212> PRT
 <213> Homo sapiens

<400> 465
 Met Ala Ser Phe Ser Ala Glu Thr Asn Ser Thr Asp Leu Leu Ser Gln
 1 5 10 15
 Pro Trp Asn Glu Pro Pro Val Ile Leu Ser Met Val Ile Leu Ser Leu
 20 25 30
 Thr Phe Leu Leu Gly Leu Pro Gly Asn Gly Leu Val Leu Trp Val Ala
 35 40 45
 Gly Leu Lys Met Gln Arg Thr Val Asn Thr Ile Trp Phe Leu His Leu
 50 55 60
 Thr Leu Ala Asp Leu Leu Cys Cys Leu Ser Leu Pro Phe Ser Leu Ala
 65 70 75 80
 His Leu Ala Leu Gln Gly Gln Trp Pro Tyr Gly Arg Phe Leu Cys Lys
 85 90 95
 Leu Ile Pro Ser Ile Ile Val Leu Asn Met Phe Ala Ser Val Phe Leu
 100 105 110
 Leu Thr Ala Ile Ser Leu Asp Arg Cys Leu Val Val Phe Lys Pro Ile
 115 120 125
 Trp Cys Gln Asn His Arg Asn Val Gly Met Ala Cys Ser Ile Cys Gly
 130 135 140
 Cys Ile Trp Val Val Ala Cys Val Met Cys Ile Pro Val Phe Val Tyr
 145 150 155 160
 Arg Glu Ile Phe Thr Thr Asp Asn His Asn Arg Cys Gly Tyr Lys Phe
 165 170 175
 Gly Leu Ser Ser Ser Leu Asp Tyr Pro Asp Phe Tyr Gly Asp Pro Leu
 180 185 190
 Glu Asn Arg Ser Leu Glu Asn Ile Val Gln Pro Pro Gly Glu Met Asn
 195 200 205
 Asp Arg Leu Asp Pro Ser Ser Phe Gln Thr Asn Asp His Pro Trp Thr
 210 215 220

Val	Pro	Thr	Val	Phe	Gln	Pro	Gln	Thr	Phe	Gln	Arg	Pro	Ser	Ala	Asp	225	230	235	240
Ser	Leu	Pro	Arg	Gly	Ser	Ala	Arg	Leu	Thr	Ser	Gln	Asn	Leu	Tyr	Ser	245	250	255	
Asn	Val	Phe	Lys	Pro	Ala	Asp	Val	Val	Ser	Pro	Lys	Ile	Pro	Ser	Gly	260	265	270	
Phe	Pro	Ile	Glu	Asp	His	Glu	Thr	Ser	Pro	Leu	Asp	Asn	Ser	Asp	Ala	275	280	285	
Phe	Leu	Ser	Thr	His	Leu	Lys	Leu	Phe	Pro	Ser	Ala	Ser	Ser	Asn	Ser	290	295	300	
Phe	Tyr	Glu	Ser	Glu	Leu	Pro	Gln	Gly	Phe	Gln	Asp	Tyr	Tyr	Asn	Leu	305	310	315	320
Gly	Gln	Phe	Thr	Asp	Asp	Asp	Gln	Val	Pro	Thr	Pro	Leu	Val	Ala	Ile	325	330	335	
Thr	Ile	Thr	Arg	Leu	Val	Val	Gly	Phe	Leu	Leu	Pro	Ser	Val	Ile	Met	340	345	350	
Ile	Ala	Cys	Tyr	Ser	Phe	Ile	Val	Phe	Arg	Met	Gln	Arg	Gly	Arg	Phe	355	360	365	
Ala	Lys	Ser	Gln	Ser	Lys	Thr	Lys	Arg	Val	Ala	Val	Val	Val	Val	Ala	370	375	380	
Val	Phe	Leu	Val	Cys	Trp	Thr	Pro	Tyr	His	Ile	Phe	Gly	Val	Leu	Ser	385	390	395	400
Leu	Leu	Thr	Asp	Pro	Glu	Thr	Pro	Leu	Gly	Lys	Thr	Leu	Met	Ser	Trp	405	410	415	
Asp	His	Val	Cys	Ile	Ala	Leu	Ala	Ser	Ala	Asn	Ser	Cys	Phe	Asn	Pro	420	425	430	
Phe	Leu	Tyr	Ala	Leu	Leu	Gly	Lys	Asp	Phe	Arg	Lys	Lys	Ala	Arg	Gln	435	440	445	
Ser	Ile	Gln	Gly	Ile	Leu	Glu	Ala	Ala	Phe	Ser	Glu	Glu	Leu	Thr	Arg	450	455	460	
Ser	Thr	His	Cys	Pro	Ser	Asn	Asn	Val	Ile	Ser	Glu	Arg	Asn	Ser	Thr	465	470	475	480
Thr	Val																		

<210> 466
 <211> 1053
 <212> DNA
 <213> Homo sapiens

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<400> 466
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ttggatcatc ttgcagtcgt cttcctgggt ggagtgtggt gcaatgccct ggtggtctgg 180
gtgacggcat tcgaggccaa gcggaccatc aatgccatct ggttcctcaa cttggcggtg 240
gccgacttcc tctcctgcct ggcgctgccc atcttgttca cgtccattgt acagcatcac 300
cactggccct ttggcggggc cgctgcagc atcctgcct cctcctcct gctcaacatg 360
tacgccagca tctgtctcct ggccaccatc agcgccgacc gctttctgct ggtgtttaaa 420
cccatctggt gccagaactt ccgagggggc ggcttggcct ggatcgctg tgcctgggt 480
tggtgtttag cctgtctgct gaccataccc tcttctctgt accgggtggt ccgggaggag 540
tactttccac caaaggtgtt gtgtggcgtg gactacagcc acgacaaacg gcgggagcga 600
gccgtggcca tcgtccggct ggtcctgggc ttctgtggc ctctactcac gctcacgatt 660
tgttacactt tcatcctgct ccggacgtgg agcgcgagg ccacgcggtc caccaagaca 720
aagaaggtgg tgggtggcagt ggtggccagt ttctttatct tctggttgcc ctaccagggtg 780
acggggataa tgatgtcctt cctggagcca tcgtcaccca cttcctgct gctgaataag 840
ctggactccc tgtgtgtctc ctttgctac atcaactgct gcatcaacc catcatctac 900
gtggtggcgc gccagggcct ccagggccga ctgcggaaat cctccccag cctcctccgg 960
aacgtgttga ctgaagagtc cgtggttagg gagagcaagt cattcacgcg ctccacagt 1020
gacactatgg ccagaagac ccaggcagt tag 1053

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<210> 467
<211> 350
<212> PRT
<213> Homo sapiens

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<400> 467
Met Asn Ser Phe Asn Tyr Thr Thr Pro Asp Tyr Gly His Tyr Asp Asp
  1             5             10             15

Lys Asp Thr Leu Asp Leu Asn Thr Pro Val Asp Lys Thr Ser Asn Thr
      20             25             30

Leu Arg Val Pro Asp Ile Leu Ala Leu Val Ile Phe Ala Val Val Phe
      35             40             45

Leu Val Gly Val Leu Gly Asn Ala Leu Val Val Trp Val Thr Ala Phe
      50             55             60

Glu Ala Lys Arg Thr Ile Asn Ala Ile Trp Phe Leu Asn Leu Ala Val
      65             70             75             80

Ala Asp Phe Leu Ser Cys Leu Ala Leu Pro Ile Leu Phe Thr Ser Ile
      85             90             95

Val Gln His His His Trp Pro Phe Gly Gly Ala Ala Cys Ser Ile Leu
      100            105            110

Pro Ser Leu Ile Leu Leu Asn Met Tyr Ala Ser Ile Leu Leu Leu Ala
      115            120            125

Thr Ile Ser Ala Asp Arg Phe Leu Leu Val Phe Lys Pro Ile Trp Cys
      130            135            140

Gln Asn Phe Arg Gly Ala Gly Leu Ala Trp Ile Ala Cys Ala Val Ala
      145            150            155            160

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Trp Gly Leu Ala Leu Leu Leu Thr Ile Pro Ser Phe Leu Tyr Arg Val
 165 170 175
 Val Arg Glu Glu Tyr Phe Pro Pro Lys Val Leu Cys Gly Val Asp Tyr
 180 185 190
 Ser His Asp Lys Arg Arg Glu Arg Ala Val Ala Ile Val Arg Leu Val
 195 200 205
 Leu Gly Phe Leu Trp Pro Leu Leu Thr Leu Thr Ile Cys Tyr Thr Phe
 210 215 220
 Ile Leu Leu Arg Thr Trp Ser Arg Arg Ala Thr Arg Ser Thr Lys Thr
 225 230 235 240
 Lys Lys Val Val Val Ala Val Val Ala Ser Phe Phe Ile Phe Trp Leu
 245 250 255
 Pro Tyr Gln Val Thr Gly Ile Met Met Ser Phe Leu Glu Pro Ser Ser
 260 265 270
 Pro Thr Phe Leu Leu Leu Asn Lys Leu Asp Ser Leu Cys Val Ser Phe
 275 280 285
 Ala Tyr Ile Asn Cys Cys Ile Asn Pro Ile Ile Tyr Val Val Ala Gly
 290 295 300
 Gln Gly Phe Gln Gly Arg Leu Arg Lys Ser Leu Pro Ser Leu Leu Arg
 305 310 315 320
 Asn Val Leu Thr Glu Glu Ser Val Val Arg Glu Ser Lys Ser Phe Thr
 325 330 335
 Arg Ser Thr Val Asp Thr Met Ala Gln Lys Thr Gln Ala Val
 340 345 350

<210> 468
 <211> 1419
 <212> DNA
 <213> Homo sapiens

<400> 468
 atgaagtcga tcctagatgg ccttgcagat accaccttcc gcaccatcac cactgacctc 60
 ctgtacgtgg gctcaaatga cattcagtac gaagacatca aaggtgacat ggcattccaaa 120
 ttaggggtact tcccacagaa attcccttta acttccttta ggggaagtcc cttccaagag 180
 aagatgactg cgggagacaa cccccagcta gtcccagcag accaggtgaa cattacagaa 240
 ttttacaaca agtctctctc gtccttcaag gagaatgagg agaacatcca gtgtggggag 300
 aacttcatgg acatagagtg tttcatgggc ctgaacccca gccagcagct ggccattgca 360
 gtccctgtccc tcacgctggg caccttcacg gtccctggaga acctcctggg gctgtgcgtc 420
 atcctccact cccgcagcct ccgctgcagg ccttccctacc acttcatcgg cagcctggcg 480
 gtggcagacc tcctggggag tgtcattttt gtctaacagt tcattgactt ccacgtgttc 540
 caccgcaaag atagccgcaa cgtgtttctg ttcaaactgg gtgggggtcac ggcctccttc 600
 actgcctcgg tgggcagcct gttcctcaca gccatcgaca ggtacatatc cattcacagg 660
 cccctggcct ataagaggat tgtcaccagg cccaaggccg tggtagcggt ttgcctgatg 720
 tggaccatag ccattgtgat cgccgtgctg cctctcctgg gctggaactg cgagaaactg 780


```

caatctgttt gctcagacat tttccacac attgatgaaa cctacctgat gttctggatc 840
ggggtcacca gcgtactgct tctgttcac gtgtatgctg acatgtatat tctctggaag 900
gctcacagcc acgccgtccg catgattcag cgtggcacc agaagagcat catcatccac 960
acgtctgagg atgggaaggt acaggtgacc cggccagacc aagcccgcg ggacattagg 1020
ttaaagaaga ccttggctct gatcctgggt gtgttgatca tctgctgggg cctctgtgct 1080
gcaatcatgg tgtatgatgt ctttgggaag atgaacaagc tcattaagac ggtgtttgca 1140
ttctgcagta tgctctgcct gctgaactcc accgtgaacc ccatcatcta tgctctgagg 1200
agtaaggacc tgcgacacgc tttccggagc atgtttccct cttgtgaagg cactgcgag 1260
cctctggata acagcatggg ggactcggac tgctgcaca aacacgcaaa caatgcagcc 1320
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atgtctgtgt ccacagacac gtctgccgag gctctgtga 1419

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<210> 469
 <211> 472
 <212> PRT
 <213> Homo sapiens

<400> 469

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Met Lys Ser Ile Leu Asp Gly Leu Ala Asp Thr Thr Phe Arg Thr Ile
  1             5             10             15

Thr Thr Asp Leu Leu Tyr Val Gly Ser Asn Asp Ile Gln Tyr Glu Asp
      20             25             30

Ile Lys Gly Asp Met Ala Ser Lys Leu Gly Tyr Phe Pro Gln Lys Phe
      35             40             45

Pro Leu Thr Ser Phe Arg Gly Ser Pro Phe Gln Glu Lys Met Thr Ala
      50             55             60

Gly Asp Asn Pro Gln Leu Val Pro Ala Asp Gln Val Asn Ile Thr Glu
      65             70             75             80

Phe Tyr Asn Lys Ser Leu Ser Ser Phe Lys Glu Asn Glu Glu Asn Ile
      85             90             95

Gln Cys Gly Glu Asn Phe Met Asp Ile Glu Cys Phe Met Val Leu Asn
      100            105            110

Pro Ser Gln Gln Leu Ala Ile Ala Val Leu Ser Leu Thr Leu Gly Thr
      115            120            125

Phe Thr Val Leu Glu Asn Leu Leu Val Leu Cys Val Ile Leu His Ser
      130            135            140

Arg Ser Leu Arg Cys Arg Pro Ser Tyr His Phe Ile Gly Ser Leu Ala
      145            150            155            160

Val Ala Asp Leu Leu Gly Ser Val Ile Phe Val Tyr Ser Phe Ile Asp
      165            170            175

Phe His Val Phe His Arg Lys Asp Ser Arg Asn Val Phe Leu Phe Lys
      180            185            190

Leu Gly Gly Val Thr Ala Ser Phe Thr Ala Ser Val Gly Ser Leu Phe
      195            200            205

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Leu 210	Thr	Ala	Ile	Asp	Arg	Tyr 215	Ile	Ser	Ile	His	Arg 220	Pro	Leu	Ala	Tyr
Lys 225	Arg	Ile	Val	Thr	Arg 230	Pro	Lys	Ala	Val	Val 235	Ala	Phe	Cys	Leu	Met 240
Trp	Thr	Ile	Ala	Ile 245	Val	Ile	Ala	Val	Leu 250	Pro	Leu	Leu	Gly	Trp 255	Asn
Cys	Glu	Lys	Leu 260	Gln	Ser	Val	Cys	Ser 265	Asp	Ile	Phe	Pro	His 270	Ile	Asp
Glu	Thr	Tyr 275	Leu	Met	Phe	Trp	Ile 280	Gly	Val	Thr	Ser 285	Val	Leu	Leu	Leu
Phe	Ile 290	Val	Tyr	Ala	Tyr	Met 295	Tyr	Ile	Leu	Trp	Lys 300	Ala	His	Ser	His
Ala 305	Val	Arg	Met	Ile	Gln 310	Arg	Gly	Thr	Gln	Lys 315	Ser	Ile	Ile	Ile	His 320
Thr	Ser	Glu	Asp	Gly 325	Lys	Val	Gln	Val	Thr 330	Arg	Pro	Asp	Gln	Ala 335	Arg
Met	Asp	Ile 340	Arg	Leu	Lys	Lys	Thr	Leu 345	Val	Leu	Ile	Leu	Val 350	Val	Leu
Ile	Ile	Cys 355	Trp	Gly	Pro	Leu	Leu 360	Ala	Ile	Met	Val 365	Tyr	Asp	Val	Phe
Gly 370	Lys	Met	Asn	Lys	Leu	Ile 375	Lys	Thr	Val	Phe	Ala 380	Phe	Cys	Ser	Met
Leu 385	Cys	Leu	Leu	Asn	Ser 390	Thr	Val	Asn	Pro	Ile 395	Ile	Tyr	Ala	Leu	Arg 400
Ser	Lys	Asp	Leu 405	Arg	His	Ala	Phe	Arg	Ser 410	Met	Phe	Pro	Ser	Cys 415	Glu
Gly	Thr	Ala	Gln 420	Pro	Leu	Asp	Asn	Ser 425	Met	Gly	Asp	Ser	Asp 430	Cys	Leu
His	Lys 435	His	Ala	Asn	Asn	Ala	Ala 440	Ser	Val	His	Arg 445	Ala	Ala	Glu	Ser
Cys	Ile 450	Lys	Ser	Thr	Val	Lys 455	Ile	Ala	Lys	Val	Thr 460	Met	Ser	Val	Ser
Thr 465	Asp	Thr	Ser	Ala	Glu 470	Ala	Leu								

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<210> 470
<211> 1083
<212> DNA
<213> Homo sapiens
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<211> 1083

<212> DNA

<213> Homo sapiens

<400> 470

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actcttctgg gcctgctaag tgccctggag aacgtggctg tgctctatct gatcctgtcc 180
tcccaccaac tccgccgga gccctcatal ctgttcattg gcagcttggc tggggctgac 240
ttcctggcca gtgtggtctt tgcattgacg tttgtgaatt tccatgtttt ccatggtgtg 300
gattccaagg ctgtcttctt gctgaagatt ggcagcgtga ctatgacctt cacagcctct 360
gtgggtagcc tcttctgacg cgccattgac cgatacctct gcctgcgcta tccaccttcc 420
tacaaagctc tgctcaccgg tggaggggca ctggtgacct tgggcatcat gtgggtcctc 480
tcagcactag tctcctacct gccctcatg ggatggactt gctgtcccag gccctgctct 540
gagcttttcc cactgatccc caatgactac ctgctgagct ggctcctgtt catcgccttc 600
ctcttttccg gaatcatcta cacctatggg catgttctct ggaaggccca tcagcatgtg 660
gccagcttgt ctggccacca ggacaggcag gtgccaggaa tggcccgaat gaggctggat 720
gtgaggttga agaagaccct agggctagtgt ttggtgtgtc tccatcatctg ttggttccca 780
gtgctggccc tcatggccca cagcctggcc actacgctca gtgaccaggt caagaaggcc 840
tttgccttct gctccatgct gtgcctcatc aactccatgg tcaaccctgt catctatgct 900
ctacggagtgt gagagatccg ctctctctgc catcactgcc tggctcactg gaagaagtgt 960
gtgagggggc ttgggtcaga ggcaaaagaa gaagccccga gatcctcagt caccgagaca 1020
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tga

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<210> 471

<211> 360

<212> PRT

<213> Homo sapiens

<400> 471

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Met Glu Glu Cys Trp Val Thr Glu Ile Ala Asn Gly Ser Lys Asp Gly
  1              5              10              15

Leu Asp Ser Asn Pro Met Lys Asp Tyr Met Ile Leu Ser Gly Pro Gln
          20              25              30

Lys Thr Ala Val Ala Val Leu Cys Thr Leu Leu Gly Leu Leu Ser Ala
          35              40              45

Leu Glu Asn Val Ala Val Leu Tyr Leu Ile Leu Ser Ser His Gln Leu
          50              55              60

Arg Arg Lys Pro Ser Tyr Leu Phe Ile Gly Ser Leu Ala Gly Ala Asp
          65              70              75              80

Phe Leu Ala Ser Val Val Phe Ala Cys Ser Phe Val Asn Phe His Val
          85              90              95

Phe His Gly Val Asp Ser Lys Ala Val Phe Leu Leu Lys Ile Gly Ser
          100              105              110

Val Thr Met Thr Phe Thr Ala Ser Val Gly Ser Leu Leu Leu Thr Ala
          115              120              125

Ile Asp Arg Tyr Leu Cys Leu Arg Tyr Pro Pro Ser Tyr Lys Ala Leu
          130              135              140

Leu Thr Arg Gly Arg Ala Leu Val Thr Leu Gly Ile Met Trp Val Leu

```

145		150		155		160
Ser Ala Leu Val	Ser Tyr Leu Pro Leu Met Gly Trp Thr Cys Cys Pro					
	165			170		175
Arg Pro Cys Ser Glu Leu Phe Pro Leu Ile Pro Asn Asp Tyr Leu Leu						
	180			185		190
Ser Trp Leu Leu Phe Ile Ala Phe Leu Phe Ser Gly Ile Ile Tyr Thr						
	195			200		205
Tyr Gly His Val Leu Trp Lys Ala His Gln His Val Ala Ser Leu Ser						
	210			215		220
Gly His Gln Asp Arg Gln Val Pro Gly Met Ala Arg Met Arg Leu Asp						
	225			230		235
Val Arg Leu Lys Lys Thr Leu Gly Leu Val Leu Ala Val Leu Leu Ile						
	245			250		255
Cys Trp Phe Pro Val Leu Ala Leu Met Ala His Ser Leu Ala Thr Thr						
	260			265		270
Leu Ser Asp Gln Val Lys Lys Ala Phe Ala Phe Cys Ser Met Leu Cys						
	275			280		285
Leu Ile Asn Ser Met Val Asn Pro Val Ile Tyr Ala Leu Arg Ser Gly						
	290			295		300
Glu Ile Arg Ser Ser Ala His His Cys Leu Ala His Trp Lys Lys Cys						
	305			310		315
Val Arg Gly Leu Gly Ser Glu Ala Lys Glu Glu Ala Pro Arg Ser Ser						
	325			330		335
Val Thr Glu Thr Glu Ala Asp Gly Lys Ile Thr Pro Trp Pro Asp Ser						
	340			345		350
Arg Asp Leu Asp Leu Ser Asp Cys						
	355			360		

<210> 472
 <211> 1083
 <212> DNA
 <213> Homo sapiens

<400> 472
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 accacctttt ttgattatga ttacgggtgct cctgtcata aatttgacgt gaagcaaatt 120
 ggggcccaac tcttgccctcc gctctactcg ctgggtgttca tctttgggtt tgtgggcaac 180
 atgctggtcg tctcatctt aataaaactgc aaaaagctga agtgcttgac tgacatttac 240
 ctgctcaacc tggccatctc tgatctgctt tttcttatta ctctccatt gtgggctcac 300
 tctgctgcaa atgagtgggt ctttgggaat gcaatgtgca aattattcac agggctgtat 360
 cacatcggtt attttggcgg aatcttcttc atcatcctcc tgacaatcga tagatacctg 420
 gctattgtcc atgctgtgtt tgctttaaaa gccaggacgg tcacctttgg ggtggtgaca 480
 agtgtgatca cctggttggg ggctgtgttt gcttctgtcc caggaatcat ctttactaaa 540

tgccagaaag aagattctgt ttatgtctgt ggccttatt ttccacgagg atggaataat 600
 ttccacacaa taatgaggaa ctttttgggg ctggtcctgc cgctgctcat catggctcatc 660
 tgctactcgg gaatcctgaa aaccctgctt cgggtgcgaa acgagaagaa gaggcatagg 720
 gcaaagagag tcatcttcac catcatgatt gtttactttc tcttctggac tccctataac 780
 attgtcattc tcctgaacac cttccaggaa ttcttcggcc tgagtaactg tgaaagcacc 840
 agtcaactgg accaagccac gcaggtgaca gagactcttg ggatgactca ctgctgcatc 900
 aatcccatca tctatgcctt cgttggggag aagttcagaa ggtatctctc ggtgttcttc 960
 cgaaagcaca tcaccaagcg cttctgcaaa caatgtccag ttttctacag ggagacagtg 1020
 gatggagtga cttcaacaaa cagccttcc actggggagc aggaagtctc ggctgggtta 1080
 taa 1083

<210> 473
 <211> 360
 <212> PRT
 <213> Homo sapiens

<400> 473

Met	Leu	Ser	Thr	Ser	Arg	Ser	Arg	Phe	Ile	Arg	Asn	Thr	Asn	Glu	Ser
1				5					10					15	
Gly	Glu	Glu	Val	Thr	Thr	Phe	Phe	Asp	Tyr	Asp	Tyr	Gly	Ala	Pro	Cys
			20					25					30		
His	Lys	Phe	Asp	Val	Lys	Gln	Ile	Gly	Ala	Gln	Leu	Leu	Pro	Pro	Leu
		35					40					45			
Tyr	Ser	Leu	Val	Phe	Ile	Phe	Gly	Phe	Val	Gly	Asn	Met	Leu	Val	Val
	50					55					60				
Leu	Ile	Leu	Ile	Asn	Cys	Lys	Lys	Leu	Lys	Cys	Leu	Thr	Asp	Ile	Tyr
	65			70						75				80	
Leu	Leu	Asn	Leu	Ala	Ile	Ser	Asp	Leu	Leu	Phe	Leu	Ile	Thr	Leu	Pro
				85					90					95	
Leu	Trp	Ala	His	Ser	Ala	Ala	Asn	Glu	Trp	Val	Phe	Gly	Asn	Ala	Met
			100					105					110		
Cys	Lys	Leu	Phe	Thr	Gly	Leu	Tyr	His	Ile	Gly	Tyr	Phe	Gly	Gly	Ile
		115					120					125			
Phe	Phe	Ile	Ile	Leu	Leu	Thr	Ile	Asp	Arg	Tyr	Leu	Ala	Ile	Val	His
	130					135					140				
Ala	Val	Phe	Ala	Leu	Lys	Ala	Arg	Thr	Val	Thr	Phe	Gly	Val	Val	Thr
	145				150					155					160
Ser	Val	Ile	Thr	Trp	Leu	Val	Ala	Val	Phe	Ala	Ser	Val	Pro	Gly	Ile
				165					170					175	
Ile	Phe	Thr	Lys	Cys	Gln	Lys	Glu	Asp	Ser	Val	Tyr	Val	Cys	Gly	Pro
			180					185					190		
Tyr	Phe	Pro	Arg	Gly	Trp	Asn	Asn	Phe	His	Thr	Ile	Met	Arg	Asn	Ile
		195					200					205			

Leu Gly Leu Val Leu Pro Leu Leu Ile Met Val Ile Cys Tyr Ser Gly
 210 215 220
 Ile Leu Lys Thr Leu Leu Arg Cys Arg Asn Glu Lys Lys Arg His Arg
 225 230 235 240
 Ala Lys Arg Val Ile Phe Thr Ile Met Ile Val Tyr Phe Leu Phe Trp
 245 250 255
 Thr Pro Tyr Asn Ile Val Ile Leu Leu Asn Thr Phe Gln Glu Phe Phe
 260 265 270
 Gly Leu Ser Asn Cys Glu Ser Thr Ser Gln Leu Asp Gln Ala Thr Gln
 275 280 285
 Val Thr Glu Thr Leu Gly Met Thr His Cys Cys Ile Asn Pro Ile Ile
 290 295 300
 Tyr Ala Phe Val Gly Glu Lys Phe Arg Arg Tyr Leu Ser Val Phe Phe
 305 310 315 320
 Arg Lys His Ile Thr Lys Arg Phe Cys Lys Gln Cys Pro Val Phe Tyr
 325 330 335
 Arg Glu Thr Val Asp Gly Val Thr Ser Thr Asn Thr Pro Ser Thr Gly
 340 345 350
 Glu Gln Glu Val Ser Ala Gly Leu
 355 360

<210> 474
 <211> 1068
 <212> DNA
 <213> Homo sapiens

<400> 474
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 ggccctgctct gtgaaaaagc tgataccaga gcactgatgg cccagtttgt gcccccgctg 120
 tactccctgg tgttactgt gggcctcttg ggcaatgtgg tgggtggtgat gatcctcata 180
 aaatacagga ggctccgaat tatgaccaac atctacctgc tcaacctggc catttcggac 240
 ctgctcttcc tcgtcacccct tccattcttg atccactatg tcagggggca taactgggtt 300
 tttggccatg gcatgtgtaa gctcctctca gggttttatc acacaggcct gtacagcgag 360
 atctttttca taatcctgct gacaatcgac aggtacctgg ccattgtcca tgctgtgttt 420
 gcccttcgag cccggactgt cacttttggg gtcacacca gcatcgtcac ctggggcctg 480
 gcagtgtag cagctcttcc tgaatttata ttctatgaga ctgaagagtt gtttgaagag 540
 actctttgca gtgctcttta cccagaggat acagtatata gctggaggca tttccacact 600
 ctgagaatga ccatcttctg tctcgttctc cctctgctcg ttatggccat ctgctacaca 660
 ggaatcatca aaacgctgct gaggtgcccc agtaaaaaaa agtacaaggc caagcggctc 720
 atttttgtca tcatggcggg gtttttccatt ttctggacac cctacaatgt ggctatcctt 780
 ctctcttctt atcaatccat cttatttggg aatgactgtg agcggagcaa gcatctggac 840
 ctggtcatgc tgggtgacaga ggtgatcgcc tactccact gctgcatgaa cccggtgatc 900
 tacgcctttg ttggagagag gttccggaag tacctgcgcc acttcttcca caggcacttg 960
 ctcatgcacc tgggcagata catcccattc ctctctagtg agaagctgga aagaaccagc 1020
 tctgtctctc catccacagc agagcoggaa ctctctattg tgtttttag 1068

[illegible]

Met Thr Thr Ser Leu Asp Thr Val Glu Thr Phe Gly Thr Thr Ser Tyr
1 5 10 15

Met Ala Gln Phe Val Pro Pro Leu Tyr Ser Leu Val Phe Thr Val Gly
35 40 45

Leu Leu Gly Asn Val Val Val Val Met Ile Leu Ile Lys Tyr Arg Arg
50 55 60

Leu Arg Ile Met Thr Asn Ile Tyr Leu Leu Asn Leu Ala Ile Ser Asp
65 70 75 80

Leu Leu Phe Leu Val Thr Leu Pro Phe Trp Ile His Tyr Val Arg Gly
85 90 95

His Asn Trp Val Phe Gly His Gly Met Cys Lys Leu Leu Ser Gly Phe
100 105 110

Tyr His Thr Gly Leu Tyr Ser Glu Ile Phe Phe Ile Ile Leu Leu Thr
115 120 125

Ile Asp Arg Tyr Leu Ala Ile Val His Ala Val Phe Ala Leu Arg Ala
130 135 140

Arg Thr Val Thr Phe Gly Val Ile Thr Ser Ile Val Thr Trp Gly Leu
145 150 155 160

Ala Val Leu Ala Ala Leu Pro Glu Phe Ile Phe Tyr Glu Thr Glu Glu
165 170 175

Leu Phe Glu Glu Thr Leu Cys Ser Ala Leu Tyr Pro Glu Asp Thr Val
180 185 190

Tyr Ser Trp Arg His Phe His Thr Leu Arg Met Thr Ile Phe Cys Leu
195 200 205

Val Leu Pro Leu Leu Val Met Ala Ile Cys Tyr Thr Gly Ile Ile Lys
210 215 220

Thr Leu Leu Arg Cys Pro Ser Lys Lys Lys Tyr Lys Ala Lys Arg Leu
225 230 235 240

Ile Phe Val Ile Met Ala Val Phe Phe Ile Phe Trp Thr Pro Tyr Asn
245 250 255

Val Ala Ile Leu Leu Ser Ser Tyr Gln Ser Ile Leu Phe Gly Asn Asp
260 265 270

Cys Glu Arg Ser Lys His Leu Asp Leu Val Met Leu Val Thr Glu Val
275 280 285

Ile Ala Tyr Ser His Cys Cys Met Asn Pro Val Ile Tyr Ala Phe Val
290 295 300

Gly Glu Arg Phe Arg Lys Tyr Leu Arg His Phe Phe His Arg His Leu
305 310 315 320

Leu Met His Leu Gly Arg Tyr Ile Pro Phe Leu Pro Ser Glu Lys Leu
325 330 335

Glu Arg Thr Ser Ser Val Ser Pro Ser Thr Ala Glu Pro Glu Leu Ser
340 345 350

Ile Val Phe
355

<210> 476
<211> 1059
<212> DNA
<213> Homo sapiens

<400> 476
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ttcatctttg gttttgtggg caacatgctg gtcactctca tcctgataaa ctgcaaaagg 180
ctgaagagca tgactgacat ctacctgctc aacctggcca tctctgacct gtttttcctt 240
cttactgtcc ccttctgggc tcaactatgct gccgcccagt gggactttgg aaatacaatg 300
tgtcaactct tgacagggct ctattttata ggcttcttct ctggaatctt cttcatcatc 360
ctcctgacaa tcgataggta cctggctgtc gtccatgctg tgtttgcttt aaaagccagg 420
acggtcacct ttgggggtgg gacaagtgtg atcacttggg tgggtggctgt gtttgctgtc 480
ctcccaggaa tcactctttac cagatctcaa aaagaaggct ttcattacac ctgcagctct 540
cattttccat acagtcagta tcaattctgg aagaatttcc agacattaaa gatagtcac 600
ttggggctgg tcctgcccgt gcttgctcat gtcactgtct actcgggaat cctaaaaact 660
ctgcttcggg gtcgaaatga gaagaagagg cacagggcta agaggcttat cttcaccatc 720
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caggaattct ttggcctgaa taattgcagt agctctaaca gggttgacca agctatgcag 840
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ggggagaagt tcagaaacta cctcttagtc ttcttccaaa agcacattgc caaacgcttc 960
tgcaaagtct gttctatctt ccagcaagag gctcccagag gagcaagctc agtttacacc 1020
cgatccactg gggagcagga aatatctgtg ggcttgtga 1059

<210> 477
<211> 352
<212> PRT
<213> Homo sapiens

<400> 477
Met Asp Tyr Gln Val Ser Ser Pro Ile Tyr Asp Ile Asn Tyr Tyr Thr
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Ser Glu Pro Cys Gln Lys Ile Asn Val Lys Gln Ile Ala Ala Arg Leu
20 25 30

SECRET

Ser Val Tyr Thr Arg Ser Thr Gly Glu Gln Glu Ile Ser Val Gly Leu
 340 345 350

<210> 478
 <211> 1068
 <212> DNA
 <213> Homo sapiens

<400> 478
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 ttctcaagcc cctgtgatgc ggaacttatt cagacaaatg gcaagttgct ccttgctgtc 120
 ttttattgcc tcctgtttgt attcagtcct ctgggaaaca gcctggcat cctggctcct 180
 gtggtctgca agaagctgag gagcatcaca gatgtatacc tcttgaacct ggccctgtct 240
 gacctgcttt ttgtcttctc cttccccctt cagacctact atctgctgga ccagtgggtg 300
 tttgggactg taatgtgcaa agtgggtgtct ggcttttatt acattggctt ctacagcagc 360
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<210> 479
 <211> 355
 <212> PRT
 <213> Homo sapiens

<400> 479
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 Asn Gly Lys Leu Leu Leu Ala Val Phe Tyr Cys Leu Leu Phe Val Phe
 35 40 45
 Ser Leu Leu Gly Asn Ser Leu Val Ile Leu Val Leu Val Val Cys Lys
 50 55 60
 Lys Leu Arg Ser Ile Thr Asp Val Tyr Leu Leu Asn Leu Ala Leu Ser
 65 70 75 80
 Asp Leu Leu Phe Val Phe Ser Phe Pro Phe Gln Thr Tyr Tyr Leu Leu
 85 90 95

Asp	Gln	Trp	Val	Phe	Gly	Thr	Val	Met	Cys	Lys	Val	Val	Ser	Gly	Phe	100	105	110
Tyr	Tyr	Ile	Gly	Phe	Tyr	Ser	Ser	Met	Phe	Phe	Ile	Thr	Leu	Met	Ser	115	120	125
Val	Asp	Arg	Tyr	Leu	Ala	Val	Val	His	Ala	Val	Tyr	Ala	Leu	Lys	Val	130	135	140
Arg	Thr	Ile	Arg	Met	Gly	Thr	Thr	Leu	Cys	Leu	Ala	Val	Trp	Leu	Thr	145	150	155
Ala	Ile	Met	Ala	Thr	Ile	Pro	Leu	Leu	Val	Phe	Tyr	Gln	Val	Ala	Ser	165	170	175
Glu	Asp	Gly	Val	Leu	Gln	Cys	Tyr	Ser	Phe	Tyr	Asn	Gln	Gln	Thr	Leu	180	185	190
Lys	Trp	Lys	Ile	Phe	Thr	Asn	Phe	Lys	Met	Asn	Ile	Leu	Gly	Leu	Leu	195	200	205
Ile	Pro	Phe	Thr	Ile	Phe	Met	Phe	Cys	Tyr	Ile	Lys	Ile	Leu	His	Gln	210	215	220
Leu	Lys	Arg	Cys	Gln	Asn	His	Asn	Lys	Thr	Lys	Ala	Lys	Arg	Leu	Val	225	230	235
Leu	Ile	Val	Val	Ile	Ala	Ser	Leu	Leu	Phe	Trp	Val	Pro	Phe	Asn	Val	245	250	255
Val	Leu	Phe	Leu	Thr	Ser	Leu	His	Ser	Met	His	Ile	Leu	Asp	Gly	Cys	260	265	270
Ser	Ile	Ser	Gln	Gln	Leu	Thr	Tyr	Ala	Thr	His	Val	Thr	Glu	Ile	Ile	275	280	285
Ser	Phe	Thr	His	Cys	Cys	Val	Asn	Pro	Val	Ile	Tyr	Ala	Phe	Val	Gly	290	295	300
Glu	Lys	Phe	Lys	Lys	His	Leu	Ser	Glu	Ile	Phe	Gln	Lys	Ser	Cys	Ser	305	310	315
Gln	Ile	Phe	Asn	Tyr	Leu	Gly	Arg	Gln	Met	Pro	Arg	Glu	Ser	Cys	Glu	325	330	335
Lys	Ser	Ser	Ser	Cys	Gln	Gln	His	Ser	Ser	Arg	Ser	Ser	Ser	Val	Asp	340	345	350
Tyr	Ile	Leu														355		

<210> 480
 <211> 1110
 <212> DNA
 <213> Homo sapiens

<400> 480

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<210> 481

<211> 369

<212> PRT

<213> Homo sapiens

<400> 481

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Met Thr Pro Thr Asp Phe Thr Ser Pro Ile Pro Asn Met Ala Asp Asp
  1                      5                      10                      15

Tyr Gly Ser Glu Ser Thr Ser Ser Met Glu Asp Tyr Val Asn Phe Asn
      20                      25                      30

Phe Thr Asp Phe Tyr Cys Glu Lys Asn Asn Val Arg Gln Phe Ala Ser
      35                      40                      45

His Phe Leu Pro Pro Leu Tyr Trp Leu Val Phe Ile Val Gly Ala Leu
      50                      55                      60

Gly Asn Ser Leu Val Ile Leu Val Tyr Trp Tyr Cys Thr Arg Val Lys
      65                      70                      75                      80

Thr Met Thr Asp Met Phe Leu Leu Asn Leu Ala Ile Ala Asp Leu Leu
      85                      90                      95

Phe Leu Val Thr Leu Pro Phe Trp Ala Ile Ala Ala Ala Asp Gln Trp
      100                      105                      110

Lys Phe Gln Thr Phe Met Cys Lys Val Val Asn Ser Met Tyr Lys Met
      115                      120                      125

Asn Phe Tyr Ser Cys Val Leu Leu Ile Met Cys Ile Ser Val Asp Arg
      130                      135                      140

Tyr Ile Ala Ile Ala Gln Ala Met Arg Ala His Thr Trp Arg Glu Lys
      145                      150                      155                      160

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Arg Leu Leu Tyr Ser Lys Met Val Cys Phe Thr Ile Trp Val Leu Ala
165 170 175

Ala Ala Leu Cys Ile Pro Glu Ile Leu Tyr Ser Gln Ile Lys Glu Glu
180 185 190

Ser Gly Ile Ala Ile Cys Thr Met Val Tyr Pro Ser Asp Glu Ser Thr
195 200 205

Lys Leu Lys Ser Ala Val Leu Thr Leu Lys Val Ile Leu Gly Phe Phe
210 215 220

Leu Pro Phe Val Val Met Ala Cys Cys Tyr Thr Ile Ile Ile His Thr
225 230 235 240

Leu Ile Gln Ala Lys Lys Ser Ser Lys His Lys Ala Lys Lys Val Thr
245 250 255

Ile Thr Val Leu Thr Val Phe Val Leu Ser Gln Phe Pro Tyr Asn Cys
260 265 270

Ile Leu Leu Val Gln Thr Ile Asp Ala Tyr Ala Met Phe Ile Ser Asn
275 280 285

Cys Ala Val Ser Thr Asn Ile Asp Ile Cys Phe Gln Val Thr Gln Thr
290 295 300

Ile Ala Phe Phe His Ser Cys Leu Asn Pro Val Leu Tyr Val Phe Val
305 310 315 320

Gly Glu Arg Phe Arg Arg Asp Leu Val Lys Thr Leu Lys Asn Leu Gly
325 330 335

Cys Ile Ser Gln Ala Gln Trp Val Ser Phe Thr Arg Arg Glu Gly Ser
340 345 350

Leu Lys Leu Ser Ser Met Leu Leu Glu Thr Thr Ser Gly Ala Leu Ser
355 360 365

Leu

<210> 482
<211> 1248
<212> DNA
<213> Homo sapiens

<400> 482
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gggcagctag tggttcggcc ctgccctgcc tttttctatg gtgtccgcta caataccaca 240
aacaatggct accgggagtg cctggccaat ggcagctggg ccgcccgcgt gaattactcc 300
gagtgccagg agatcctcaa tgaggagaaa aaaagcaagg tgcactacca tgtcgcagtc 360
atcatcaact acctgggcca ctgtatctcc ctggtggccc tcctggtggc ctttgtcttc 420

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caccagagca acgtgggctg gtgcagggtg gtgacagccg cctacaacta cttccatgtg 600
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tactccactg accggctgcg caaatggatg ttcatctgca ttggctgggg tgtgcccttc 720
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<210> 483
 <211> 415
 <212> PRT
 <213> Homo sapiens

<400> 483

Met	Gly	Gly	His	Pro	Gln	Leu	Arg	Leu	Val	Lys	Ala	Leu	Leu	Leu	Leu	1	5	10	15
Gly	Leu	Asn	Pro	Val	Ser	Ala	Ser	Leu	Gln	Asp	Gln	His	Cys	Glu	Ser	20	25	30	
Leu	Ser	Leu	Ala	Ser	Asn	Ile	Ser	Gly	Leu	Gln	Cys	Asn	Ala	Ser	Val	35	40	45	
Asp	Leu	Ile	Gly	Thr	Cys	Trp	Pro	Arg	Ser	Pro	Ala	Gly	Gln	Leu	Val	50	55	60	
Val	Arg	Pro	Cys	Pro	Ala	Phe	Phe	Tyr	Gly	Val	Arg	Tyr	Asn	Thr	Thr	65	70	75	80
Asn	Asn	Gly	Tyr	Arg	Glu	Cys	Leu	Ala	Asn	Gly	Ser	Trp	Ala	Ala	Arg	85	90	95	
Val	Asn	Tyr	Ser	Glu	Cys	Gln	Glu	Ile	Leu	Asn	Glu	Glu	Lys	Lys	Ser	100	105	110	
Lys	Val	His	Tyr	His	Val	Ala	Val	Ile	Ile	Asn	Tyr	Leu	Gly	His	Cys	115	120	125	
Ile	Ser	Leu	Val	Ala	Leu	Leu	Val	Ala	Phe	Val	Leu	Phe	Leu	Arg	Leu	130	135	140	
Arg	Ser	Ile	Arg	Cys	Leu	Arg	Asn	Ile	Ile	His	Trp	Asn	Leu	Ile	Ser	145	150	155	160
Ala	Phe	Ile	Leu	Arg	Asn	Ala	Thr	Trp	Phe	Val	Val	Gln	Leu	Thr	Met	165	170	175	
Ser	Pro	Glu	Val	His	Gln	Ser	Asn	Val	Gly	Trp	Cys	Arg	Leu	Val	Thr	180	185	190	

Ala Ala Tyr Asn Tyr Phe His Val Thr Asn Phe Phe Trp Met Phe Gly
195 200 205

Glu Gly Cys Tyr Leu His Thr Ala Ile Val Leu Thr Tyr Ser Thr Asp
210 215 220

Arg Leu Arg Lys Trp Met Phe Ile Cys Ile Gly Trp Gly Val Pro Phe
225 230 235 240

Pro Ile Ile Val Ala Trp Ala Ile Gly Lys Leu Tyr Tyr Asp Asn Glu
245 250 255

Lys Cys Trp Phe Gly Lys Arg Pro Gly Val Tyr Thr Asp Tyr Ile Tyr
260 265 270

Gln Gly Pro Met Ile Leu Val Leu Leu Ile Asn Phe Ile Phe Leu Phe
275 280 285

Asn Ile Val Arg Ile Leu Met Thr Lys Leu Arg Ala Ser Thr Thr Ser
290 295 300

Glu Thr Ile Gln Tyr Arg Lys Ala Val Lys Ala Pro Leu Val Leu Leu
305 310 315 320

Pro Leu Leu Gly Ile Thr Tyr Met Leu Phe Phe Val Asn Pro Gly Glu
325 330 335

Asp Glu Val Ser Arg Val Val Phe Ile Tyr Phe Asn Ser Phe Leu Glu
340 345 350

Ser Phe Gln Gly Phe Phe Val Ser Val Phe Tyr Cys Phe Leu Asn Ser
355 360 365

Glu Val Arg Ser Ala Ile Arg Lys Arg Trp His Arg Trp Gln Asp Lys
370 375 380

His Ser Ile Arg Ala Arg Val Ala Arg Ala Met Ser Ile Pro Thr Ser
385 390 395 400

Pro Thr Arg Val Ser Phe His Ser Ile Lys Gln Ser Thr Ala Val
405 410 415

<210> 484
<211> 1059
<212> DNA
<213> Homo sapiens

<400> 484
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aactggtact ttgggaactt cctatgcaag gcagtccatg tcatctacac agtcaacctc 360
tacagcagtg tcctcatcct ggccttcacg agtctggacc gctacctggc catcgtccac 420

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<210> 485
 <211> 352
 <212> PRT
 <213> Homo sapiens

<400> 485

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Met Glu Gly Ile Ser Ile Tyr Thr Ser Asp Asn Tyr Thr Glu Glu Met
  1             5             10             15

```

```

Gly Ser Gly Asp Tyr Asp Ser Met Lys Glu Pro Cys Phe Arg Glu Glu
      20             25             30

```

```

Asn Ala Asn Phe Asn Lys Ile Phe Leu Pro Thr Ile Tyr Ser Ile Ile
      35             40             45

```

```

Phe Leu Thr Gly Ile Val Gly Asn Gly Leu Val Ile Leu Val Met Gly
      50             55             60

```

```

Tyr Gln Lys Lys Leu Arg Ser Met Thr Asp Lys Tyr Arg Leu His Leu
      65             70             75             80

```

```

Ser Val Ala Asp Leu Leu Phe Val Ile Thr Leu Pro Phe Trp Ala Val
      85             90             95

```

```

Asp Ala Val Ala Asn Trp Tyr Phe Gly Asn Phe Leu Cys Lys Ala Val
      100            105            110

```

```

His Val Ile Tyr Thr Val Asn Leu Tyr Ser Ser Val Leu Ile Leu Ala
      115            120            125

```

```

Phe Ile Ser Leu Asp Arg Tyr Leu Ala Ile Val His Ala Thr Asn Ser
      130            135            140

```

```

Gln Arg Pro Arg Lys Leu Leu Ala Glu Lys Val Val Tyr Val Gly Val
      145            150            155            160

```

```

Trp Ile Pro Ala Leu Leu Leu Thr Ile Pro Asp Phe Ile Phe Ala Asn
      165            170            175

```

```

Val Ser Glu Ala Asp Asp Arg Tyr Ile Cys Asp Arg Phe Tyr Pro Asn
      180            185            190

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Asp Leu Trp Val Val Val Phe Gln Phe Gln His Ile Met Val Gly Leu
      195            200            205

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[illegible]

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 aacggtcagc acccaacctg a 1341

<210> 487
 <211> 446
 <212> PRT
 <213> Homo sapiens

<400> 487

Met	Arg	Thr	Leu	Asn	Thr	Ser	Ala	Met	Asp	Gly	Thr	Gly	Leu	Val	Val	1	5	10	15
Glu	Arg	Asp	Phe	Ser	Val	Arg	Ile	Leu	Thr	Ala	Cys	Phe	Leu	Ser	Leu	20	25	30	
Leu	Ile	Leu	Ser	Thr	Leu	Leu	Gly	Asn	Thr	Leu	Val	Cys	Ala	Ala	Val	35	40	45	
Ile	Arg	Phe	Arg	His	Leu	Arg	Ser	Lys	Val	Thr	Asn	Phe	Phe	Val	Ile	50	55	60	
Ser	Leu	Ala	Val	Ser	Asp	Leu	Leu	Val	Ala	Val	Leu	Val	Met	Pro	Trp	65	70	75	80
Lys	Ala	Val	Ala	Glu	Ile	Ala	Gly	Phe	Trp	Pro	Phe	Gly	Ser	Phe	Cys	85	90	95	
Asn	Ile	Trp	Val	Ala	Phe	Asp	Ile	Met	Cys	Ser	Thr	Ala	Ser	Ile	Leu	100	105	110	
Asn	Leu	Cys	Val	Ile	Ser	Val	Asp	Arg	Tyr	Trp	Ala	Ile	Ser	Ser	Pro	115	120	125	
Phe	Arg	Tyr	Glu	Arg	Lys	Met	Thr	Pro	Lys	Ala	Ala	Phe	Ile	Leu	Ile	130	135	140	
Ser	Val	Ala	Trp	Thr	Leu	Ser	Val	Leu	Ile	Ser	Phe	Ile	Pro	Val	Gln	145	150	155	160
Leu	Ser	Trp	His	Lys	Ala	Lys	Pro	Thr	Ser	Pro	Ser	Asp	Gly	Asn	Ala	165	170	175	
Thr	Ser	Leu	Ala	Glu	Thr	Ile	Asp	Asn	Cys	Asp	Ser	Ser	Leu	Ser	Arg	180	185	190	
Thr	Tyr	Ala	Ile	Ser	Ser	Ser	Val	Ile	Ser	Phe	Tyr	Ile	Pro	Val	Ala	195	200	205	
Ile	Met	Ile	Val	Thr	Tyr	Thr	Arg	Ile	Tyr	Arg	Ile	Ala	Gln	Lys	Gln	210	215	220	
Ile	Arg	Arg	Ile	Ala	Ala	Leu	Glu	Arg	Ala	Ala	Val	His	Ala	Lys	Asn	225	230	235	240

Cys Gln Thr Thr Thr Gly Asn Gly Lys Pro Val Glu Cys Ser Gln Pro
245 250 255

Glu Ser Ser Phe Lys Met Ser Phe Lys Arg Glu Thr Lys Val Lys Lys
260 265 270

Thr Leu Ser Val Ile Met Gly Val Phe Val Cys Cys Trp Leu Pro Phe
275 280 285

Phe Ile Leu Asn Cys Ile Leu Pro Phe Cys Gly Ser Gly Glu Thr Gln
290 295 300

Pro Phe Cys Ile Asp Ser Asn Thr Phe Asp Val Phe Val Trp Phe Gly
305 310 315 320

Trp Ala Asn Ser Ser Leu Asn Pro Ile Ile Tyr Ala Phe Asn Ala Asp
325 330 335

Phe Arg Lys Ala Phe Ser Thr Leu Leu Gly Cys Tyr Arg Leu Cys Pro
340 345 350

Ala Thr Asn Asn Ala Ile Glu Thr Val Ser Ile Asn Asn Asn Gly Ala
355 360 365

Ala Met Phe Ser Ser His His Glu Pro Arg Gly Ser Ile Ser Lys Glu
370 375 380

Cys Asn Leu Val Tyr Leu Ile Pro His Ala Val Gly Ser Ser Glu Asp
385 390 395 400

Leu Lys Lys Glu Glu Ala Ala Gly Ile Ala Arg Pro Leu Glu Lys Leu
405 410 415

Ser Pro Ala Leu Ser Val Ile Leu Asp Tyr Asp Thr Asp Val Ser Leu
420 425 430

Glu Lys Ile Gln Pro Met Thr Gln Asn Gly Gln His Pro Thr
435 440 445

<210> 488
<211> 1332
<212> DNA
<213> Homo sapiens

<400> 488
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aagcgagtca acaccaaacy cagcagccga gctttcaggg cccacctgag ggctccacta 720
aagggcaact gtactcaccg cgaggacatg aaactctgca ccgttatcat gaagtctaat 780
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agccaccacc agctgactct ccccgaccg tcccaccatg gtctccacag cactcccagc 960
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tgcaacatcc cgctgtcct gtacagcgcc ttcacgtggc tgggctatgt caacagcgcc 1260
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ctccactgct ga 1332

<210> 489
<211> 443
<212> PRT
<213> Homo sapiens

<400> 489

Met Asp Pro Leu Asn Leu Ser Trp Tyr Asp Asp Asp Leu Glu Arg Gln
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Asn Trp Ser Arg Pro Phe Asn Gly Ser Asp Gly Lys Ala Asp Arg Pro
20 25 30

His Tyr Asn Tyr Tyr Ala Thr Arg Leu Thr Leu Leu Ile Ala Val Ile
35 40 45

Val Phe Gly Asn Val Leu Val Cys Met Ala Val Ser Arg Glu Lys Ala
50 55 60

Leu Gln Thr Thr Thr Asn Tyr Leu Ile Val Ser Leu Ala Val Ala Asp
65 70 75 80

Leu Leu Val Ala Thr Leu Val Met Pro Trp Val Val Tyr Leu Glu Val
85 90 95

Val Gly Glu Trp Lys Phe Ser Arg Ile His Cys Asp Ile Phe Val Thr
100 105 110

Leu Asp Val Met Met Cys Thr Ala Ser Ile Leu Asn Leu Cys Ala Ile
115 120 125

Ser Ile Asp Arg Tyr Thr Ala Val Ala Met Pro Met Leu Tyr Asn Thr
130 135 140

Arg Tyr Ser Ser Lys Arg Arg Val Thr Val Met Ile Ser Ile Val Trp
145 150 155 160

Val Leu Ser Phe Thr Ile Ser Cys Pro Leu Leu Phe Gly Leu Asn Asn
165 170 175

Ala Asp Gln Asn Glu Cys Ile Ile Ala Asn Pro Ala Phe Val Val Tyr
180 185 190

Ser Ser Ile Val Ser Phe Tyr Val Pro Phe Ile Val Thr Leu Leu Val

06-09-2017

<400> 490
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ctggccatcg tcttcggcaa tggcctggtg tgcattggtg tgctgaagga gcgggccttg 180

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<210> 491
 <211> 400
 <212> PRT
 <213> Homo sapiens

<400> 491
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 Ala Glu Asn Ser Thr Gly Ala Ser Gln Ala Arg Pro His Ala Tyr Tyr
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 Ala Leu Ser Tyr Cys Ala Leu Ile Leu Ala Ile Val Phe Gly Asn Gly
 35 40 45
 Leu Val Cys Met Ala Val Leu Lys Glu Arg Ala Leu Gln Thr Thr Thr
 50 55 60
 Asn Tyr Leu Val Val Ser Leu Ala Val Ala Asp Leu Leu Val Ala Thr
 65 70 75 80
 Leu Val Met Pro Trp Val Val Tyr Leu Glu Val Thr Gly Gly Val Trp
 85 90 95
 Asn Phe Ser Arg Ile Cys Cys Asp Val Phe Val Thr Leu Asp Val Met
 100 105 110
 Met Cys Thr Ala Ser Ile Leu Asn Leu Cys Ala Ile Ser Ile Asp Arg
 115 120 125
 Tyr Thr Ala Val Val Met Pro Val His Tyr Gln His Gly Thr Gly Gln
 130 135 140
 Ser Ser Cys Arg Arg Val Ala Leu Met Ile Thr Ala Val Trp Val Leu
 145 150 155 160
 Ala Phe Ala Val Ser Cys Pro Leu Leu Phe Gly Phe Asn Thr Thr Gly

165	170	175
Asp Pro Thr Val Cys Ser Ile Ser Asn Pro Asp Phe Val Ile Tyr Ser		
180	185	190
Ser Val Val Ser Phe Tyr Leu Pro Phe Gly Val Thr Val Leu Val Tyr		
195	200	205
Ala Arg Ile Tyr Val Val Leu Lys Gln Arg Arg Arg Lys Arg Ile Leu		
210	215	220
Thr Arg Gln Asn Ser Gln Cys Asn Ser Val Arg Pro Gly Phe Pro Gln		
225	230	235
Gln Thr Leu Ser Pro Asp Pro Ala His Leu Glu Leu Lys Arg Tyr Tyr		
245	250	255
Ser Ile Cys Gln Asp Thr Ala Leu Gly Gly Pro Gly Phe Gln Glu Arg		
260	265	270
Gly Gly Glu Leu Lys Arg Glu Glu Lys Thr Arg Asn Ser Leu Ser Pro		
275	280	285
Thr Ile Ala Pro Lys Leu Ser Leu Glu Val Arg Lys Leu Ser Asn Gly		
290	295	300
Arg Leu Ser Thr Ser Leu Lys Leu Gly Pro Leu Gln Pro Arg Gly Val		
305	310	315
Pro Leu Arg Glu Lys Lys Ala Lys Gln Met Val Ala Ile Val Leu Gly		
325	330	335
Ala Phe Ile Val Cys Trp Leu Pro Phe Phe Leu Thr His Val Leu Asn		
340	345	350
Thr His Cys Gln Thr Cys His Val Ser Pro Glu Leu Tyr Ser Ala Thr		
355	360	365
Thr Trp Leu Gly Tyr Val Asn Ser Ala Leu Asn Pro Val Ile Tyr Thr		
370	375	380
Thr Phe Asn Ile Glu Phe Arg Lys Ala Phe Leu Lys Ile Leu Ser Cys		
385	390	395
		400

<210> 492
 <211> 1434
 <212> DNA
 <213> Homo sapiens

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 gtgggtcaccg cctgcctgct gaccctactc atcatctgga ccctgctggg caacgtgctg 180

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gccgaggtgg ccggttactg gccctttgga gcgttctgag acgtctgggt ggccttcgac 360
atcatgtgct ccactgcctc catcctgaac ctgtgctgca tcagcgtgga ccgctactgg 420
gccatctcca ggcccttcgg ctacaagcgc aagatgactc agcgcagtcg cttgggtcatg 480
gtcggcctgg catggacctt gtccatcctc atctccttca ttccgggtcca gctcaactgg 540
cacagggacc aggcggcctc ttggggcggg ctggacctgc caaacaacct ggccaactgg 600
acgccctggg agggaggactt ttggggagccc gacgtgaatg cagagaactg tgactccagc 660
ctgaatcgaa cctacgccat ctcttctctg ctcatcagct tctacatccc cgttgccatc 720
atgatcgtga cctacacgag catctaccgc atcgcccagg tgcagatccg caggatttcc 780
tccctggaga gggccgcaga gcacgcgcag agctgccgga gcagcgcagc ctgcgcgccc 840
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atcatggggg tcttctgtgt ttgctggctg ccttcttcca tcttaactg catggctcct 960
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cgacgcggg tggagacggt gaacatcagc aatgagctca tctcctacaa ccaagacatc 1200
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ggcaaccggg aggtggacaa cgacgaggag gagggtcctt tcgatcgcat gttccagatc 1320
tatcagacgt cccagatgg tgacctgtt gctgagctg tctgggagct ggactgcgag 1380
ggggagattt ctttagacaa aataacacct ttcacccga atggattcca ttaa 1434

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<210> 493
 <211> 477
 <212> PRT
 <213> Homo sapiens

<400> 493
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 Leu Tyr Gln Gln Leu Ala Gln Gly Asn Ala Val Gly Gly Ser Ala Gly
 20 25 30
 Ala Pro Pro Leu Gly Pro Ser Gln Val Val Thr Ala Cys Leu Leu Thr
 35 40 45
 Leu Leu Ile Ile Trp Thr Leu Leu Gly Asn Val Leu Val Cys Ala Ala
 50 55 60
 Ile Val Arg Ser Arg His Leu Arg Ala Asn Met Thr Asn Val Phe Ile
 65 70 75 80
 Val Ser Leu Ala Val Ser Asp Leu Phe Val Ala Leu Leu Val Met Pro
 85 90 95
 Trp Lys Ala Val Ala Glu Val Ala Gly Tyr Trp Pro Phe Gly Ala Phe
 100 105 110
 Cys Asp Val Trp Val Ala Phe Asp Ile Met Cys Ser Thr Ala Ser Ile
 115 120 125
 Leu Asn Leu Cys Val Ile Ser Val Asp Arg Tyr Trp Ala Ile Ser Arg
 130 135 140
 Pro Phe Arg Tyr Lys Arg Lys Met Thr Gln Arg Met Ala Leu Val Met

145		150		155		160
Val Gly Leu Ala Trp Thr Leu Ser Ile Leu Ile Ser Phe Ile Pro Val						
		165		170		175
Gln Leu Asn Trp His Arg Asp Gln Ala Ala Ser Trp Gly Gly Leu Asp						
		180		185		190
Leu Pro Asn Asn Leu Ala Asn Trp Thr Pro Trp Glu Glu Asp Phe Trp						
		195		200		205
Glu Pro Asp Val Asn Ala Glu Asn Cys Asp Ser Ser Leu Asn Arg Thr						
		210		215		220
Tyr Ala Ile Ser Ser Ser Leu Ile Ser Phe Tyr Ile Pro Val Ala Ile						
		225		230		235
Met Ile Val Thr Tyr Thr Arg Ile Tyr Arg Ile Ala Gln Val Gln Ile						
		245		250		255
Arg Arg Ile Ser Ser Leu Glu Arg Ala Ala Glu His Ala Gln Ser Cys						
		260		265		270
Arg Ser Ser Ala Ala Cys Ala Pro Asp Thr Ser Leu Arg Ala Ser Ile						
		275		280		285
Lys Lys Glu Thr Lys Val Lys Lys Thr Leu Ser Val Ile Met Gly Val						
		290		295		300
Phe Val Cys Cys Trp Leu Pro Phe Phe Ile Leu Asn Cys Met Val Pro						
		305		310		315
Phe Cys Ser Gly His Pro Glu Gly Pro Pro Ala Gly Phe Pro Cys Val						
		325		330		335
Ser Glu Thr Thr Phe Asp Val Phe Val Trp Phe Gly Trp Ala Asn Ser						
		340		345		350
Ser Leu Asn Pro Val Ile Tyr Ala Phe Asn Ala Asp Phe Gln Lys Val						
		355		360		365
Phe Ala Gln Leu Leu Gly Cys Ser His Phe Cys Ser Arg Thr Pro Val						
		370		375		380
Glu Thr Val Asn Ile Ser Asn Glu Leu Ile Ser Tyr Asn Gln Asp Ile						
		385		390		395
Val Phe His Lys Glu Ile Ala Ala Ala Tyr Ile His Met Met Pro Asn						
		405		410		415
Ala Val Thr Pro Gly Asn Arg Glu Val Asp Asn Asp Glu Glu Glu Gly						
		420		425		430
Pro Phe Asp Arg Met Phe Gln Ile Tyr Gln Thr Ser Pro Asp Gly Asp						
		435		440		445
Pro Val Ala Glu Ser Val Trp Glu Leu Asp Cys Glu Gly Glu Ile Ser						

450

455

460

Leu Asp Lys Ile Thr Pro Phe Thr Pro Asn Gly Phe His
 465 470 475

<210> 494
 <211> 1284
 <212> DNA
 <213> Homo sapiens

<400> 494
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 cgtggcacag agctcagctt cctgggttacc actcatcaac ccactaattt ggtcctaccc 180
 agcaatggct caatgcacaa ctattgcccc cagcagacta aaattacttc agctttcaaa 240
 tacattaaca ctgtgatata ttgtactatt ttcatcgtgg gaatgggtggg gaatgcaact 300
 ctgctcagga tcatttacca gaacaaatgt atgaggaatg gcccacacgc gctgatagcc 360
 agtcttgccc ttggagacct tatctatgtg gtcattgatc tccctatcaa tgtattttaag 420
 ctgctggctg ggcgctggcc ttttgatcac aatgactttg gcgtatttct ttgcaagctg 480
 ttcccccttt tgcagaagtc ctcggtgggg atcaccgtcc tcaacctctg cgctcttagt 540
 gttgacaggt acagagcagt tgcctcctgg agtcgtgttc aggggaattgg gattcctttg 600
 gtaactgcca ttgaaattgt ctccatctgg atcctgtcct ttatcctggc cattcctgaa 660
 gcgattggct tcgtcatggg accctttgaa tataggggtg aacagcataa aacctgtatg 720
 ctcaatgcca catcaaaatt catggagtgc taccaagatg taaaggactg gtggctcttc 780
 gggttctatt tctgtatgcc cttggtgtgc actgcgatct tctacaccct catgacttgt 840
 gagatgttga acagaaggaa tggcagcttg agaattgccc tcagtgaaca tcttaagcag 900
 cgtcgagaag tgaaaaaac agttttctgc ttggttgtaa tttttgctct ttgctgggtc 960
 cctcttctact taagccgtat attgaagaaa actgtgtata acgaaatgga caagaaccga 1020
 tgtgaattac ttagtttctt actgctcatg gattacatcg gtattaactt ggcaaccatg 1080
 aattcatgta taaaccccat agctctgtat tttgtgagca agaaatttaa aaattgtttc 1140
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 agccataagg acagcatgaa ctga 1284

<210> 495
 <211> 427
 <212> PRT
 <213> Homo sapiens

<400> 495
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 Cys Val Ile Ser Asp Asn Pro Glu Arg Tyr Ser Thr Asn Leu Ser Asn
 20 25 30
 His Val Asp Asp Phe Thr Thr Phe Arg Gly Thr Glu Leu Ser Phe Leu
 35 40 45
 Val Thr Thr His Gln Pro Thr Asn Leu Val Leu Pro Ser Asn Gly Ser
 50 55 60
 Met His Asn Tyr Cys Pro Gln Gln Thr Lys Ile Thr Ser Ala Phe Lys
 65 70 75 80

Tyr	Ile	Asn	Thr	Val	Ile	Ser	Cys	Thr	Ile	Phe	Ile	Val	Gly	Met	Val	85	90	95
Gly	Asn	Ala	Thr	Leu	Leu	Arg	Ile	Ile	Tyr	Gln	Asn	Lys	Cys	Met	Arg	100	105	110
Asn	Gly	Pro	Asn	Ala	Leu	Ile	Ala	Ser	Leu	Ala	Leu	Gly	Asp	Leu	Ile	115	120	125
Tyr	Val	Val	Ile	Asp	Leu	Pro	Ile	Asn	Val	Phe	Lys	Leu	Leu	Ala	Gly	130	135	140
Arg	Trp	Pro	Phe	Asp	His	Asn	Asp	Phe	Gly	Val	Phe	Leu	Cys	Lys	Leu	145	150	155
Phe	Pro	Phe	Leu	Gln	Lys	Ser	Ser	Val	Gly	Ile	Thr	Val	Leu	Asn	Leu	165	170	175
Cys	Ala	Leu	Ser	Val	Asp	Arg	Tyr	Arg	Ala	Val	Ala	Ser	Trp	Ser	Arg	180	185	190
Val	Gln	Gly	Ile	Gly	Ile	Pro	Leu	Val	Thr	Ala	Ile	Glu	Ile	Val	Ser	195	200	205
Ile	Trp	Ile	Leu	Ser	Phe	Ile	Leu	Ala	Ile	Pro	Glu	Ala	Ile	Gly	Phe	210	215	220
Val	Met	Val	Pro	Phe	Glu	Tyr	Arg	Gly	Glu	Gln	His	Lys	Thr	Cys	Met	225	230	235
Leu	Asn	Ala	Thr	Ser	Lys	Phe	Met	Glu	Phe	Tyr	Gln	Asp	Val	Lys	Asp	245	250	255
Trp	Trp	Leu	Phe	Gly	Phe	Tyr	Phe	Cys	Met	Pro	Leu	Val	Cys	Thr	Ala	260	265	270
Ile	Phe	Tyr	Thr	Leu	Met	Thr	Cys	Glu	Met	Leu	Asn	Arg	Arg	Asn	Gly	275	280	285
Ser	Leu	Arg	Ile	Ala	Leu	Ser	Glu	His	Leu	Lys	Gln	Arg	Arg	Glu	Val	290	295	300
Lys	Lys	Thr	Val	Phe	Cys	Leu	Val	Val	Ile	Phe	Ala	Leu	Cys	Trp	Phe	305	310	315
Pro	Leu	His	Leu	Ser	Arg	Ile	Leu	Lys	Lys	Thr	Val	Tyr	Asn	Glu	Met	325	330	335
Asp	Lys	Asn	Arg	Cys	Glu	Leu	Leu	Ser	Phe	Leu	Leu	Leu	Met	Asp	Tyr	340	345	350
Ile	Gly	Ile	Asn	Leu	Ala	Thr	Met	Asn	Ser	Cys	Ile	Asn	Pro	Ile	Ala	355	360	365
Leu	Tyr	Phe	Val	Ser	Lys	Lys	Phe	Lys	Asn	Cys	Phe	Gln	Ser	Cys	Leu	370	375	380

Cys Cys Cys Cys Tyr Gln Ser Lys Ser Leu Met Thr Ser Val Pro Met
385 390 395 400

Asn Gly Thr Ser Ile Gln Trp Lys Asn His Asp Gln Asn Asn His Asn
405 410 415

Thr Asp Arg Ser Ser His Lys Asp Ser Met Asn
420 425

<210> 496
<211> 1329
<212> DNA
<213> Homo sapiens

<400> 496
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caaaccgcag agataatgac gccacccact aagaccttat ggcccaaggg ttccaacgcc 180
agtctggcgc ggtcgttggc acctgcggag gtgcctaaag gagacaggac ggcaggatct 240
ccgccacgca ccatctcccc tcccccgctc caaggaccca tcgagatcaa ggagactttc 300
aaatacatca acacggttgt gtccctgcctt gtgttcgtgc tggggatcat cgggaactcc 360
acacttctga gaattatcta caagaacaag tgcattgcga acggtcccaa tatcttgatc 420
gccagcttgg ctctgggaga cctgctgcac atcgtcattg acatccctat caatgtctac 480
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cagaaagcct ccgtgggaat cactgtgctg agtctatgtg ctctgagtat tgacagatat 600
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gaaattgttt tgatttgggt ggtctctgtg gttctggctg tccctgaagc catagggttt 720
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ttatgctgct ggtgccagtc atttgaagaa aaacagtcct tggaggaaaa gcagtcgtgc 1260
ttaaagttca aagctaataga tcacggatat gacaacttcc gttccagtaa taaatacagc 1320
tcatcttga 1329

<210> 497
<211> 442
<212> PRT
<213> Homo sapiens

<400> 497
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20 25 30
Pro Asp Arg Ala Thr Pro Leu Leu Gln Thr Ala Glu Ile Met Thr Pro
35 40 45
Pro Thr Lys Thr Leu Trp Pro Lys Gly Ser Asn Ala Ser Leu Ala Arg

50					55					60					
Ser	Leu	Ala	Pro	Ala	Glu	Val	Pro	Lys	Gly	Asp	Arg	Thr	Ala	Gly	Ser
65					70					75					80
Pro	Pro	Arg	Thr	Ile	Ser	Pro	Pro	Pro	Cys	Gln	Gly	Pro	Ile	Glu	Ile
				85					90					95	
Lys	Glu	Thr	Phe	Lys	Tyr	Ile	Asn	Thr	Val	Val	Ser	Cys	Leu	Val	Phe
			100					105					110		
Val	Leu	Gly	Ile	Ile	Gly	Asn	Ser	Thr	Leu	Leu	Arg	Ile	Ile	Tyr	Lys
		115					120					125			
Asn	Lys	Cys	Met	Arg	Asn	Gly	Pro	Asn	Ile	Leu	Ile	Ala	Ser	Leu	Ala
	130					135					140				
Leu	Gly	Asp	Leu	Leu	His	Ile	Val	Ile	Asp	Ile	Pro	Ile	Asn	Val	Tyr
145					150					155					160
Lys	Leu	Leu	Ala	Glu	Asp	Trp	Pro	Phe	Gly	Ala	Glu	Met	Cys	Lys	Leu
				165					170					175	
Val	Pro	Phe	Ile	Gln	Lys	Ala	Ser	Val	Gly	Ile	Thr	Val	Leu	Ser	Leu
			180					185					190		
Cys	Ala	Leu	Ser	Ile	Asp	Arg	Tyr	Arg	Ala	Val	Ala	Ser	Trp	Ser	Arg
		195					200					205			
Ile	Lys	Gly	Ile	Gly	Val	Pro	Lys	Trp	Thr	Ala	Val	Glu	Ile	Val	Leu
	210					215					220				
Ile	Trp	Val	Val	Ser	Val	Val	Leu	Ala	Val	Pro	Glu	Ala	Ile	Gly	Phe
225					230					235					240
Asp	Ile	Ile	Thr	Met	Asp	Tyr	Lys	Gly	Ser	Tyr	Leu	Arg	Ile	Cys	Leu
				245					250					255	
Leu	His	Pro	Val	Gln	Lys	Thr	Ala	Phe	Met	Gln	Phe	Tyr	Lys	Thr	Ala
			260					265					270		
Lys	Asp	Trp	Trp	Leu	Phe	Ser	Phe	Tyr	Phe	Cys	Leu	Pro	Leu	Ala	Ile
		275					280					285			
Thr	Ala	Phe	Phe	Tyr	Thr	Leu	Met	Thr	Cys	Glu	Met	Leu	Arg	Lys	Lys
	290					295					300				
Ser	Gly	Met	Gln	Ile	Ala	Leu	Asn	Asp	His	Leu	Lys	Gln	Arg	Arg	Glu
305					310					315					320
Val	Lys	Lys	Thr	Val	Phe	Cys	Leu	Val	Leu	Val	Phe	Ala	Leu	Cys	Trp
				325					330					335	
Leu	Pro	Leu	His	Leu	Ser	Arg	Ile	Leu	Lys	Leu	Thr	Leu	Tyr	Asn	Gln
			340					345					350		
Asn	Asp	Pro	Asn	Arg	Cys	Glu	Leu	Leu	Ser	Phe	Leu	Leu	Val	Leu	Asp

355

360

365

Tyr Ile Gly Ile Asn Met Ala Ser Leu Asn Ser Cys Ile Asn Pro Ile
370 375 380

Ala Leu Tyr Leu Val Ser Lys Arg Phe Lys Asn Cys Phe Lys Ser Cys
385 390 395 400

Leu Cys Cys Trp Cys Gln Ser Phe Glu Glu Lys Gln Ser Leu Glu Glu
405 410 415

Lys Gln Ser Cys Leu Lys Phe Lys Ala Asn Asp His Gly Tyr Asp Asn
420 425 430

Phe Arg Ser Ser Asn Lys Tyr Ser Ser Ser
435 440

<210> 498

<211> 1053

<212> DNA

<213> Homo sapiens

<400> 498

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gtcctgggca acgggcttgt gatctgggtg gctggattcc ggatgacaca cacagtcacc 180
accatcagtt acctgaacct ggccgtggct gacttctgtt tcacctccac ttgcccattc 240
ttcatggta ggaaggccat gggaggacat tggcctttcg gctggttcct gtgcaaattc 300
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ctggaccgct gtgtttgctt cctgcatcca gtctggaccc agaaccaccg caccgtgagc 420
ctggccaaga aggtgatcat tgggccctgg gtgatggctc tgctcctcac attgccagtt 480
atcattcgtg tgactacagt acctggtaaa acggggacag tagcctgcac ttttaacttt 540
tcgccctgga ccaacgaccc taaagagagg ataaatgtgg ccgttgccat gttgacgggtg 600
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tatgggctta ttgccaccaa gatccacaag caaggcttga ttaagtccag tcgtcccaaa 720
cgggtcctct cctttgtcgc agcagccttt tttctctgct ggtccccata tcagggtggtg 780
gcccttatag ccacagtcag aatccgtgag ttattgcaag gcatgtacaa agaaattggt 840
attgcagtgg atgtgacaag tgccctggcc ttcttcaaca gctgcctcaa ccccatgctc 900
tatgtcttca tgggccagga ctccggggag aggetgatcc acgcccttcc cgccagttctg 960
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<210> 499

<211> 350

<212> PRT

<213> Homo sapiens

<400> 499

Met Glu Thr Asn Ser Ser Leu Pro Thr Asn Ile Ser Gly Gly Thr Pro
1 5 10 15

Ala Val Ser Ala Gly Tyr Leu Phe Leu Asp Ile Ile Thr Tyr Leu Val
20 25 30

Phe Ala Val Thr Phe Val Leu Gly Val Leu Gly Asn Gly Leu Val Ile

	35		40		45												
Trp	Val	Ala	Gly	Phe	Arg	Met	Thr	His	Thr	Val	Thr	Thr	Ile	Ser	Tyr		
	50					55					60						
Leu	Asn	Leu	Ala	Val	Ala	Asp	Phe	Cys	Phe	Thr	Ser	Thr	Leu	Pro	Phe		
	65				70					75					80		
Phe	Met	Val	Arg	Lys	Ala	Met	Gly	Gly	His	Trp	Pro	Phe	Gly	Trp	Phe		
				85					90					95			
Leu	Cys	Lys	Phe	Val	Phe	Thr	Ile	Val	Asp	Ile	Asn	Leu	Phe	Gly	Ser		
			100					105					110				
Val	Phe	Leu	Ile	Ala	Leu	Ile	Ala	Leu	Asp	Arg	Cys	Val	Cys	Val	Leu		
		115					120					125					
His	Pro	Val	Trp	Thr	Gln	Asn	His	Arg	Thr	Val	Ser	Leu	Ala	Lys	Lys		
	130					135					140						
Val	Ile	Ile	Gly	Pro	Trp	Val	Met	Ala	Leu	Leu	Leu	Thr	Leu	Pro	Val		
	145				150					155					160		
Ile	Ile	Arg	Val	Thr	Thr	Val	Pro	Gly	Lys	Thr	Gly	Thr	Val	Ala	Cys		
				165					170					175			
Thr	Phe	Asn	Phe	Ser	Pro	Trp	Thr	Asn	Asp	Pro	Lys	Glu	Arg	Ile	Asn		
			180					185					190				
Val	Ala	Val	Ala	Met	Leu	Thr	Val	Arg	Gly	Ile	Ile	Arg	Phe	Ile	Ile		
		195					200					205					
Gly	Phe	Ser	Ala	Pro	Met	Ser	Ile	Val	Ala	Val	Ser	Tyr	Gly	Leu	Ile		
	210					215					220						
Ala	Thr	Lys	Ile	His	Lys	Gln	Gly	Leu	Ile	Lys	Ser	Ser	Arg	Pro	Lys		
	225				230					235					240		
Arg	Val	Leu	Ser	Phe	Val	Ala	Ala	Ala	Phe	Phe	Leu	Cys	Trp	Ser	Pro		
				245					250					255			
Tyr	Gln	Val	Val	Ala	Leu	Ile	Ala	Thr	Val	Arg	Ile	Arg	Glu	Leu	Leu		
			260					265					270				
Gln	Gly	Met	Tyr	Lys	Glu	Ile	Gly	Ile	Ala	Val	Asp	Val	Thr	Ser	Ala		
		275					280					285					
Leu	Ala	Phe	Phe	Asn	Ser	Cys	Leu	Asn	Pro	Met	Leu	Tyr	Val	Phe	Met		
	290					295					300						
Gly	Gln	Asp	Phe	Arg	Glu	Arg	Leu	Ile	His	Ala	Leu	Pro	Ala	Ser	Leu		
	305				310					315					320		
Glu	Arg	Ala	Leu	Thr	Glu	Asp	Ser	Thr	Gln	Thr	Ser	Asp	Thr	Ala	Thr		
				325					330					335			
Asn	Ser	Thr	Leu	Pro	Ser	Ala	Glu	Val	Glu	Leu	Gln	Ala	Lys				

340

345

350

<210> 500
 <211> 1056
 <212> DNA
 <213> Homo sapiens

<400> 500
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 gtctctggga atgggcttgt gatctgggtg gctggattcc ggatgacacg cacagtcacc 180
 accatctgtt acctgaacct ggccctggct gacttttctt tcacggccac attaccattc 240
 ctcatgtgtc ccatggccat gggagaaaaa tggccttttg gctggttcct gtgtaagtta 300
 attcacatcg tgggtggacat caacctcttt ggaagtgtct tcttgattgg tttcattgca 360
 ctggaccgct gcatttgtgt cctgcatcca gtctgggccc agaaccaccg cactgtgagt 420
 ctggccatga aggtgatcgt cggaccttggt attcttgctc tagtccttac cttgccagtt 480
 ttctcttttt tgactacagt aactattcca aatggggaca catactgtac tttcaacttt 540
 gcatcctggg gtggcaccct tgaggagagg ctgaagggtg ccattaccat gctgacagcc 600
 agagggatta tccggtttgt cattggcttt agcttgccga tgtccattgt tgccatctgc 660
 tatgggtcca ttgcagccaa gatccacaaa aagggcata ttaaattccag ccgtcccaaa 720
 cgggtcctca ctgctgtggt ggcttctttc ttcactgtgt ggtttccctt tcaactgggt 780
 gcccttctgg gcaccgtctg gctcaaagag atgttgttct atggcaagta caaaatcatt 840
 gacatcctgg ttaacccaac gagctccctg gccttcttca acagctgcct caaccccatg 900
 ctttacgtct ttgtgggcca agacttccga gagagactga tccactccct gccaccagtt 960
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 tcacctctg cagagactga gttacaggca atgtga 1056

<210> 501
 <211> 351
 <212> PRT
 <213> Homo sapiens

<400> 501
 Met Glu Thr Asn Phe Ser Thr Pro Leu Asn Glu Tyr Glu Glu Val Ser
 1 5 10 15
 Tyr Glu Ser Ala Gly Tyr Thr Val Leu Arg Ile Leu Pro Leu Val Val
 20 25 30
 Leu Gly Val Thr Phe Val Leu Gly Val Leu Gly Asn Gly Leu Val Ile
 35 40 45
 Trp Val Ala Gly Phe Arg Met Thr Arg Thr Val Thr Thr Ile Cys Tyr
 50 55 60
 Leu Asn Leu Ala Leu Ala Asp Phe Ser Phe Thr Ala Thr Leu Pro Phe
 65 70 75 80
 Leu Ile Val Ser Met Ala Met Gly Glu Lys Trp Pro Phe Gly Trp Phe
 85 90 95
 Leu Cys Lys Leu Ile His Ile Val Val Asp Ile Asn Leu Phe Gly Ser
 100 105 110
 Val Phe Leu Ile Gly Phe Ile Ala Leu Asp Arg Cys Ile Cys Val Leu

115	120	125
His Pro Val Trp Ala Gln Asn His Arg Thr Val Ser Leu Ala Met Lys		
130	135	140
Val Ile Val Gly Pro Trp Ile Leu Ala Leu Val Leu Thr Leu Pro Val		
145	150	155
Phe Leu Phe Leu Thr Thr Val Thr Ile Pro Asn Gly Asp Thr Tyr Cys		
165	170	175
Thr Phe Asn Phe Ala Ser Trp Gly Gly Thr Pro Glu Glu Arg Leu Lys		
180	185	190
Val Ala Ile Thr Met Leu Thr Ala Arg Gly Ile Ile Arg Phe Val Ile		
195	200	205
Gly Phe Ser Leu Pro Met Ser Ile Val Ala Ile Cys Tyr Gly Leu Ile		
210	215	220
Ala Ala Lys Ile His Lys Lys Gly Met Ile Lys Ser Ser Arg Pro Lys		
225	230	235
Arg Val Leu Thr Ala Val Val Ala Ser Phe Phe Ile Cys Trp Phe Pro		
245	250	255
Phe Gln Leu Val Ala Leu Leu Gly Thr Val Trp Leu Lys Glu Met Leu		
260	265	270
Phe Tyr Gly Lys Tyr Lys Ile Ile Asp Ile Leu Val Asn Pro Thr Ser		
275	280	285
Ser Leu Ala Phe Phe Asn Ser Cys Leu Asn Pro Met Leu Tyr Val Phe		
290	295	300
Val Gly Gln Asp Phe Arg Glu Arg Leu Ile His Ser Leu Pro Thr Ser		
305	310	315
Leu Glu Arg Ala Leu Ser Glu Asp Ser Ala Pro Thr Asn Asp Thr Ala		
325	330	335
Ala Asn Ser Ala Ser Pro Pro Ala Glu Thr Glu Leu Gln Ala Met		
340	345	350

<210> 502
 <211> 1050
 <212> DNA
 <213> Homo sapiens

<400> 502
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 ggccctgatct tcgcgctggg cgtgctgggc aacagcctag tgatcaccgt gctggcgcg 180
 agcaagccgg gcaagccgg gagcaccacc aacctgttca tcctcaacct gagcatcgcc 240
 gacctggcct acctgctctt ctgcatcccc ttccaggcca ccgtgtacgc gctgcccacc 300
 tgggtgctgg gcgccttcat ctgcaagttc atccactact tcttcaccgt gtccatgctg 360

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gtgagcatct tcaccctggc cgcgatgtcc gtggaccgct acgtggccat cgtgcactcg 420
cggegtctct cctccctcag ggtgtcccgc aacgcgctgc tgggcgtggg ctgcatctgg 480
gcgctgtcca ttgccatggc ctgcgccgtg gcctaccacc agggcctctt ccaccgcgc 540
gccagcaacc agaccttctg ctgggagcag tggcccgacc ctgccacaa gaaggcctac 600
gtggtgtgca ccttcgtctt cggctacctg ctgccgctcc tgctcatctg cttctgctat 660
gccaaggctc ttaatcactt gcataaaaag ttgaagaaca tgtcaaagaa gtctgaagca 720
tccaagaaaa agactaaaca gacagttctg gtggtggttg tgggtgttg aatctcctgg 780
ctgccgcacc acatcatcca tctctgggct gagtttgag tttcccgct gacgccggct 840
tccttcctct tcagaatcac cgcccactgc ctggcgta gcaattcctc cgtgaatcct 900
atcatttatg catttctctc tgaaaatttc aggaaggcct ataaacaagt gttcaagtgt 960
cacattcgca aagattcaca cctgagtgat actaaagaaa ataaaagtcg aatagacacc 1020
ccaccatcaa ccaattgtac tcatgtgtga 1050

```

```

<210> 503
<211> 349
<212> PRT
<213> Homo sapiens

```

<400> 503

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Met Glu Leu Ala Val Gly Asn Leu Ser Glu Gly Asn Ala Ser Cys Pro
  1             5             10            15

```

```

Glu Pro Pro Ala Pro Glu Pro Gly Pro Leu Phe Gly Ile Gly Val Glu
      20             25             30

```

```

Asn Phe Val Thr Leu Val Val Phe Gly Leu Ile Phe Ala Leu Gly Val
      35             40             45

```

```

Leu Gly Asn Ser Leu Val Ile Thr Val Leu Ala Arg Ser Lys Pro Gly
      50             55             60

```

```

Lys Pro Arg Ser Thr Thr Asn Leu Phe Ile Leu Asn Leu Ser Ile Ala
      65             70             75             80

```

```

Asp Leu Ala Tyr Leu Leu Phe Cys Ile Pro Phe Gln Ala Thr Val Tyr
      85             90             95

```

```

Ala Leu Pro Thr Trp Val Leu Gly Ala Phe Ile Cys Lys Phe Ile His
      100            105            110

```

```

Tyr Phe Phe Thr Val Ser Met Leu Val Ser Ile Phe Thr Leu Ala Ala
      115            120            125

```

```

Met Ser Val Asp Arg Tyr Val Ala Ile Val His Ser Arg Arg Ser Ser
      130            135            140

```

```

Ser Leu Arg Val Ser Arg Asn Ala Leu Leu Gly Val Gly Cys Ile Trp
      145            150            155            160

```

```

Ala Leu Ser Ile Ala Met Ala Ser Pro Val Ala Tyr His Gln Gly Leu
      165            170            175

```

```

Phe His Pro Arg Ala Ser Asn Gln Thr Phe Cys Trp Glu Gln Trp Pro
      180            185            190

```

```

Asp Pro Arg His Lys Lys Ala Tyr Val Val Cys Thr Phe Val Phe Gly

```

195

200

205

Tyr Leu Leu Pro Leu Leu Leu Ile Cys Phe Cys Tyr Ala Lys Val Leu
210 215 220

Asn His Leu His Lys Lys Leu Lys Asn Met Ser Lys Lys Ser Glu Ala
225 230 235 240

Ser Lys Lys Lys Thr Lys Gln Thr Val Leu Val Val Val Val Val Phe
245 250 255

Gly Ile Ser Trp Leu Pro His His Ile Ile His Leu Trp Ala Glu Phe
260 265 270

Gly Val Phe Pro Leu Thr Pro Ala Ser Phe Leu Phe Arg Ile Thr Ala
275 280 285

His Cys Leu Ala Tyr Ser Asn Ser Ser Val Asn Pro Ile Ile Tyr Ala
290 295 300

Phe Leu Ser Glu Asn Phe Arg Lys Ala Tyr Lys Gln Val Phe Lys Cys
305 310 315 320

His Ile Arg Lys Asp Ser His Leu Ser Asp Thr Lys Glu Asn Lys Ser
325 330 335

Arg Ile Asp Thr Pro Pro Ser Thr Asn Cys Thr His Val
340 345

<210> 504

<211> 1164

<212> DNA

<213> Homo sapiens

<400> 504

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gtgggcaaca cgctgggtgct ggcggtgctg ctgcgcggcg gccaggcggt cagcactacc 180
aacctgttca tccttaacct gggcgtggcc gacctgtgtt tcatcctgtg ctgctgccc 240
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gccctcgcgc gccgcgccat ggacatctgc accttcgtct tcagctacct gcttctgtg 600
ctggttctcg gctgaccta cgcgcgcacc ttgcgctacc tctggcgcg cgtcgaccgc 660
gtggccgcgc gctcgggtgc ccggcgcgcc aagcgcaagg tgaacgcat gatcctcatc 720
gtggccgcgc tcttctgect ctgctggatg cccaccacg cgctcatcct ctgctgtgtg 780
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atcctgacgg ttgatgtggc ctga 1164

<210> 505
 <211> 387
 <212> PRT
 <213> Homo sapiens

<400> 505
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 Gly Gly Gly Gly Trp His Pro Glu Ala Val Ile Val Pro Leu Leu Phe
 20 25 30
 Ala Leu Ile Phe Leu Val Gly Thr Val Gly Asn Thr Leu Val Leu Ala
 35 40 45
 Val Leu Leu Arg Gly Gly Gln Ala Val Ser Thr Thr Asn Leu Phe Ile
 50 55 60
 Leu Asn Leu Gly Val Ala Asp Leu Cys Phe Ile Leu Cys Cys Val Pro
 65 70 75 80
 Phe Gln Ala Thr Ile Tyr Thr Leu Asp Gly Trp Val Phe Gly Ser Leu
 85 90 95
 Leu Cys Lys Ala Val His Phe Leu Ile Phe Leu Thr Met His Ala Ser
 100 105 110
 Ser Phe Thr Leu Ala Ala Val Ser Leu Asp Arg Tyr Leu Ala Ile Arg
 115 120 125
 Tyr Pro Leu His Ser Arg Glu Leu Arg Thr Pro Arg Asn Ala Leu Ala
 130 135 140
 Ala Ile Gly Leu Ile Trp Gly Leu Ser Leu Leu Phe Ser Gly Pro Tyr
 145 150 155 160
 Leu Ser Tyr Tyr Arg Gln Ser Gln Leu Ala Asn Leu Thr Val Cys His
 165 170 175
 Pro Ala Trp Ser Ala Pro Arg Arg Arg Ala Met Asp Ile Cys Thr Phe
 180 185 190
 Val Phe Ser Tyr Leu Leu Pro Val Leu Val Leu Gly Leu Thr Tyr Ala
 195 200 205
 Arg Thr Leu Arg Tyr Leu Trp Arg Ala Val Asp Pro Val Ala Ala Gly
 210 215 220
 Ser Gly Ala Arg Arg Ala Lys Arg Lys Val Lys Arg Met Ile Leu Ile
 225 230 235 240
 Val Ala Ala Leu Phe Cys Leu Cys Trp Met Pro His His Ala Leu Ile
 245 250 255
 Leu Cys Val Trp Phe Gly Gln Phe Pro Leu Thr Arg Ala Thr Tyr Ala
 260 265 270

005040-60392860

Leu Arg Ile Leu Ser His Leu Val Ser Tyr Ala Asn Ser Cys Val Asn
 275 280 285

Pro Ile Val Tyr Ala Leu Val Ser Lys His Phe Arg Lys Gly Phe Arg
 290 295 300

Thr Ile Cys Ala Gly Leu Leu Gly Arg Ala Pro Gly Arg Ala Ser Gly
 305 310 315 320

Arg Val Cys Ala Ala Ala Arg Gly Thr His Ser Gly Ser Val Leu Glu
 325 330 335

Arg Glu Ser Ser Asp Leu Leu His Met Ser Glu Ala Ala Gly Ala Leu
 340 345 350

Arg Pro Cys Pro Gly Ala Ser Gln Pro Cys Ile Leu Glu Pro Cys Pro
 355 360 365

Gly Pro Ser Trp Gln Gly Pro Lys Ala Gly Asp Ser Ile Leu Thr Val
 370 375 380

Asp Val Ala
 385

<210> 506
 <211> 1401
 <212> DNA
 <213> Homo sapiens

<400> 506
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 cggtagcgca gggagtgcc ggagacctg gcagccggc aaccgcctc aggcctcgcc 180
 tgtaacgggt ccttcgatat gtacgtctgc tgggactatg ctgcaccaa tgccactgcc 240
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 cgccagtgtg gcagtgatgg ccaatgggga ctttgagag accatacaca atgtgagaac 360
 ccagagaaga atgaggcctt tctggaccaa aggtcatct tggagcgggt gcaggtcatg 420
 tacactgtcg gctactccct gtctctcgcc aactgtctgc tagccctgct catcttgagt 480
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 cgcagctcc cgagcgcgc cttccgggc ctgccctccg gctccggccc gggcgaggtc 1320
 cccaccagcc gcggcttgct ctcggggacc ctcccagggc ctgggaatga ggccagccgg 1380
 gagttggaaa gttactgcta g 1401

<210> 507
 <211> 466
 <212> PRT
 <213> Homo sapiens

<400> 507

Met	Thr	Thr	Ser	Pro	Ile	Leu	Gln	Leu	Leu	Leu	Arg	Leu	Ser	Leu	Cys
1				5					10					15	
Gly	Leu	Leu	Leu	Gln	Arg	Ala	Glu	Thr	Gly	Ser	Lys	Gly	Gln	Thr	Ala
			20					25					30		
Gly	Glu	Leu	Tyr	Gln	Arg	Trp	Glu	Arg	Tyr	Arg	Arg	Glu	Cys	Gln	Glu
		35					40					45			
Thr	Leu	Ala	Ala	Ala	Glu	Pro	Pro	Ser	Gly	Leu	Ala	Cys	Asn	Gly	Ser
	50					55					60				
Phe	Asp	Met	Tyr	Val	Cys	Trp	Asp	Tyr	Ala	Ala	Pro	Asn	Ala	Thr	Ala
65					70					75					80
Arg	Ala	Ser	Cys	Pro	Trp	Tyr	Leu	Pro	Trp	His	His	His	Val	Ala	Ala
				85					90					95	
Gly	Phe	Val	Leu	Arg	Gln	Cys	Gly	Ser	Asp	Gly	Gln	Trp	Gly	Leu	Trp
			100					105					110		
Arg	Asp	His	Thr	Gln	Cys	Glu	Asn	Pro	Glu	Lys	Asn	Glu	Ala	Phe	Leu
		115					120					125			
Asp	Gln	Arg	Leu	Ile	Leu	Glu	Arg	Leu	Gln	Val	Met	Tyr	Thr	Val	Gly
	130					135					140				
Tyr	Ser	Leu	Ser	Leu	Ala	Thr	Leu	Leu	Leu	Ala	Leu	Leu	Ile	Leu	Ser
145					150					155					160
Leu	Phe	Arg	Arg	Leu	His	Cys	Thr	Arg	Asn	Tyr	Ile	His	Ile	Asn	Leu
				165					170					175	
Phe	Thr	Ser	Phe	Met	Leu	Arg	Ala	Ala	Ala	Ile	Leu	Ser	Arg	Asp	Arg
			180					185					190		
Leu	Leu	Pro	Arg	Pro	Gly	Pro	Tyr	Leu	Gly	Asp	Gln	Ala	Leu	Ala	Leu
		195					200					205			
Trp	Asn	Gln	Ala	Leu	Ala	Ala	Cys	Arg	Thr	Ala	Gln	Ile	Val	Thr	Gln
	210					215					220				
Tyr	Cys	Val	Gly	Ala	Asn	Tyr	Thr	Trp	Leu	Leu	Val	Glu	Gly	Val	Tyr
225					230					235					240
Leu	His	Ser	Leu	Leu	Val	Leu	Val	Gly	Gly	Ser	Glu	Glu	Gly	His	Phe
			245						250					255	
Arg	Tyr	Tyr	Leu	Leu	Leu	Gly	Trp	Gly	Ala	Pro	Ala	Leu	Phe	Val	Ile
			260					265					270		

Pro Trp Val Ile Val Arg Tyr Leu Tyr Glu Asn Thr Gln Cys Trp Glu
275 280 285

Arg Asn Glu Val Lys Ala Ile Trp Trp Ile Ile Arg Thr Pro Ile Leu
290 295 300

Met Thr Ile Leu Ile Asn Phe Leu Ile Phe Ile Arg Ile Leu Gly Ile
305 310 315 320

Leu Leu Ser Lys Leu Arg Thr Arg Gln Met Arg Cys Arg Asp Tyr Arg
325 330 335

Leu Arg Leu Ala Arg Ser Pro Leu Thr Leu Val Pro Leu Leu Gly Val
340 345 350

His Glu Val Val Phe Ala Pro Val Thr Glu Glu Gln Ala Arg Gly Ala
355 360 365

Leu Arg Phe Ala Lys Leu Gly Phe Glu Ile Phe Leu Ser Ser Phe Gln
370 375 380

Gly Phe Leu Val Ser Val Leu Tyr Cys Phe Ile Asn Lys Glu Val Gln
385 390 395 400

Ser Glu Ile Arg Arg Gly Trp His His Cys Arg Leu Arg Arg Ser Leu
405 410 415

Gly Glu Glu Gln Arg Gln Leu Pro Glu Arg Ala Phe Arg Ala Leu Pro
420 425 430

Ser Gly Ser Gly Pro Gly Glu Val Pro Thr Ser Arg Gly Leu Ser Ser
435 440 445

Gly Thr Leu Pro Gly Pro Gly Asn Glu Ala Ser Arg Glu Leu Glu Ser
450 455 460

Tyr Cys
465

<210> 508
<211> 1002
<212> DNA
<213> Homo sapiens

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cccaccctcc gctgccgggt gctggtgacc atggctgtgt gggtagccag catcctgtcc 480
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acgtggtacc tcacctccgt ctaccagcac aacctcttct tctgtgtgc cctggggatt 600

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<210> 509
 <211> 333
 <212> PRT
 <213> Homo sapiens

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<400> 509
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      20             25             30

Ala Thr Thr Val Leu Tyr Cys Leu Val Phe Leu Leu Ser Leu Val Gly
      35             40             45

Asn Ser Leu Val Leu Trp Val Leu Val Lys Tyr Glu Ser Leu Glu Ser
      50             55             60

Leu Thr Asn Ile Phe Ile Leu Asn Leu Cys Leu Ser Asp Leu Val Phe
      65             70             75             80

Ala Cys Leu Leu Pro Val Trp Ile Ser Pro Tyr His Trp Gly Trp Val
      85             90             95

Leu Gly Asp Phe Leu Cys Lys Leu Leu Asn Met Ile Phe Ser Ile Ser
      100            105            110

Leu Tyr Ser Ser Ile Phe Phe Leu Thr Ile Met Thr Ile His Arg Tyr
      115            120            125

Leu Ser Val Val Ser Pro Leu Ser Thr Leu Arg Val Pro Thr Leu Arg
      130            135            140

Cys Arg Val Leu Val Thr Met Ala Val Trp Val Ala Ser Ile Leu Ser
      145            150            155            160

Ser Ile Leu Asp Thr Ile Phe His Lys Val Leu Ser Ser Gly Cys Asp
      165            170            175

Tyr Ser Glu Leu Thr Trp Tyr Leu Thr Ser Val Tyr Gln His Asn Leu
      180            185            190

Phe Phe Leu Leu Ser Leu Gly Ile Ile Leu Phe Cys Tyr Val Glu Ile
      195            200            205

Leu Arg Thr Leu Phe Arg Ser Arg Ser Lys Arg Arg His Arg Thr Lys
      210            215            220

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609040-609040

Lys Leu Ile Phe Ala Ile Val Val Ala Tyr Phe Leu Ser Trp Gly Pro
 225 230 235 240
 Tyr Asn Phe Thr Leu Phe Leu Gln Thr Leu Phe Arg Thr Gln Ile Ile
 245 250 255
 Arg Ser Cys Glu Ala Lys Gln Gln Leu Glu Tyr Ala Leu Leu Ile Cys
 260 265 270
 Arg Asn Leu Ala Phe Ser His Cys Cys Phe Asn Pro Val Leu Tyr Val
 275 280 285
 Phe Val Gly Val Lys Phe Arg Thr His Leu Lys His Val Leu Arg Gln
 290 295 300
 Phe Trp Phe Cys Arg Leu Gln Ala Pro Ser Pro Ala Ser Ile Pro His
 305 310 315 320
 Ser Pro Gly Ala Phe Ala Tyr Glu Gly Ala Ser Phe Tyr
 325 330

<210> 510
 <211> 1155
 <212> DNA
 <213> Homo sapiens

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 tatgtcatcc ctgcagttta tgggggttatc attctgatag gcctcattgg caacatcact 180
 ttgatcaaga tcttctgtac agtcaagtcc atgcgaaacg ttccaaacct gttcatttcc 240
 agtctggctt tgggagacct gctcctccta ataacgtgtg ctccagtgga tgccagcagg 300
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 cttacctctg ttgggggtgtc tgtcttcaca ctacagcgc tctcggcaga cagatacaaa 420
 gccattgtcc ggccaatgga tatccaggcc tcccatgccc tgatgaagat ctgcctcaaa 480
 gccgccttta tctggatcat ctccatgctg ctggccattc cagaggccgt gttttctgac 540
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 gcttacaatc ttcccgtgga agggaatata catgtcaaga agcagattga atcccggaag 780
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 cagcctggcc tgatcatccg gtctcacagc actggaagga gtacaacctg catgacctcc 1080
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<210> 511
 <211> 384
 <212> PRT
 <213> Homo sapiens

<400> 511
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1	5	10	15
Met His Cys Asn Ile Ser Ser His Ser Ala Asp Leu Pro Val Asn Asp	20	25	30
Asp Trp Ser His Pro Gly Ile Leu Tyr Val Ile Pro Ala Val Tyr Gly	35	40	45
Val Ile Ile Leu Ile Gly Leu Ile Gly Asn Ile Thr Leu Ile Lys Ile	50	55	60
Phe Cys Thr Val Lys Ser Met Arg Asn Val Pro Asn Leu Phe Ile Ser	65	70	75
Ser Leu Ala Leu Gly Asp Leu Leu Leu Leu Ile Thr Cys Ala Pro Val	85	90	95
Asp Ala Ser Arg Tyr Leu Ala Asp Arg Trp Leu Phe Gly Arg Ile Gly	100	105	110
Cys Lys Leu Ile Pro Phe Ile Gln Leu Thr Ser Val Gly Val Ser Val	115	120	125
Phe Thr Leu Thr Ala Leu Ser Ala Asp Arg Tyr Lys Ala Ile Val Arg	130	135	140
Pro Met Asp Ile Gln Ala Ser His Ala Leu Met Lys Ile Cys Leu Lys	145	150	155
Ala Ala Phe Ile Trp Ile Ile Ser Met Leu Leu Ala Ile Pro Glu Ala	165	170	175
Val Phe Ser Asp Leu His Pro Phe His Glu Glu Ser Thr Asn Gln Thr	180	185	190
Phe Ile Ser Cys Ala Pro Tyr Pro His Ser Asn Glu Leu His Pro Lys	195	200	205
Ile His Ser Met Ala Ser Phe Leu Val Phe Tyr Val Ile Pro Leu Ser	210	215	220
Ile Ile Ser Val Tyr Tyr Tyr Phe Ile Ala Lys Asn Leu Ile Gln Ser	225	230	235
Ala Tyr Asn Leu Pro Val Glu Gly Asn Ile His Val Lys Lys Gln Ile	245	250	255
Glu Ser Arg Lys Arg Leu Lys Lys Thr Val Leu Val Phe Val Gly Leu	260	265	270
Phe Ala Phe Cys Trp Leu Pro Asn His Val Ile Tyr Leu Tyr Arg Ser	275	280	285
Tyr His Tyr Ser Glu Val Asp Thr Ser Met Leu His Phe Val Thr Ser	290	295	300
Ile Cys Ala Arg Leu Leu Ala Phe Thr Asn Ser Cys Val Asn Pro Phe			

305 310 315 320

Ala Leu Tyr Leu Leu Ser Lys Ser Phe Arg Lys Gln Phe Asn Thr Gln
325 330 335

Leu Leu Cys Cys Gln Pro Gly Leu Ile Ile Arg Ser His Ser Thr Gly
340 345 350

Arg Ser Thr Thr Cys Met Thr Ser Leu Lys Ser Thr Asn Pro Ser Val
355 360 365

Ala Thr Phe Ser Leu Ile Asn Gly Asn Ile Cys His Glu Arg Tyr Val
370 375 380

<210> 512
<211> 1422
<212> DNA
<213> Homo sapiens

<400> 512

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acaggcaacc	tgctggtact	catctctttc	aagggtcaaca	cggagctcaa	gacagtcaat	180
aactacttcc	tgctgagcct	ggcctgtgct	gacctcatca	tcggtacctt	ctccatgaac	240
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tggctggccc	tggactatgt	ggccagcaat	gcctccgtca	tgaatctgct	gctcatcagc	360
tttgaccgct	acttctccgt	gactcggccc	ctgagctacc	gtgccaaagc	cacaccccg	420
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<210> 513
<211> 460
<212> PRT
<213> Homo sapiens

<400> 513

Met Asn Thr Ser Ala Pro Pro Ala Val Ser Pro Asn Ile Thr Val Leu

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305 310 315 320

Ser Ser Pro Asn Thr Val Lys Arg Pro Thr Lys Lys Gly Arg Asp Arg
325 330 335

Ala Gly Lys Gly Gln Lys Pro Arg Gly Lys Glu Gln Leu Ala Lys Arg
340 345 350

Lys Thr Phe Ser Leu Val Lys Glu Lys Lys Ala Lys Arg Thr Leu Ser
355 360 365

Ala Ile Leu Leu Ala Phe Ile Leu Thr Trp Thr Pro Tyr Asn Ile Met
370 375 380

Val Leu Val Ser Thr Phe Cys Lys Asp Cys Val Pro Glu Thr Leu Trp
385 390 395 400

Glu Leu Gly Tyr Trp Leu Cys Tyr Val Asn Ser Thr Ile Asn Pro Met
405 410 415

Cys Tyr Ala Leu Cys Asn Lys Ala Phe Arg Asp Thr Phe Arg Leu Leu
420 425 430

Leu Leu Cys Arg Trp Asp Lys Arg Arg Trp Arg Lys Ile Pro Lys Arg
435 440 445

Pro Gly Ser Val His Arg Thr Pro Ser Arg Gln Cys
450 455 460

<210> 514
<211> 1401
<212> DNA
<213> Homo sapiens

<400> 514

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<210> 515
<211> 466
<212> PRT
<213> Homo sapiens

<400> 515
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Leu Ser Leu Val Thr Ile Ile Gly Asn Ile Leu Val Met Val Ser Ile
35 40 45
Lys Val Asn Arg His Leu Gln Thr Val Asn Asn Tyr Phe Leu Phe Ser
50 55 60
Leu Ala Cys Ala Asp Leu Ile Ile Gly Val Phe Ser Met Asn Leu Tyr
65 70 75 80
Thr Leu Tyr Thr Val Ile Gly Tyr Trp Pro Leu Gly Pro Val Val Cys
85 90 95
Asp Leu Trp Leu Ala Leu Asp Tyr Val Val Ser Asn Ala Ser Val Met
100 105 110
Asn Leu Leu Ile Ile Ser Phe Asp Arg Tyr Phe Cys Val Thr Lys Pro
115 120 125
Leu Thr Tyr Pro Val Lys Arg Thr Thr Lys Met Ala Gly Met Met Ile
130 135 140
Ala Ala Ala Trp Val Leu Ser Phe Ile Leu Trp Ala Pro Ala Ile Leu
145 150 155 160
Phe Trp Gln Phe Ile Val Gly Val Arg Thr Val Glu Asp Gly Glu Cys
165 170 175
Tyr Ile Gln Phe Phe Ser Asn Ala Ala Val Thr Phe Gly Thr Ala Ile
180 185 190
Ala Ala Phe Tyr Leu Pro Val Ile Ile Met Thr Val Leu Tyr Trp His
195 200 205
Ile Ser Arg Ala Ser Lys Ser Arg Ile Lys Lys Asp Lys Lys Glu Pro
210 215 220
Val Ala Asn Gln Asp Pro Val Ser Pro Ser Leu Val Gln Gly Arg Ile
225 230 235 240
Val Lys Pro Asn Asn Asn Asn Met Pro Ser Ser Asp Asp Gly Leu Glu

60592350

245 250 255
His Asn Lys Ile Gln Asn Gly Lys Ala Pro Arg Asp Pro Val Thr Glu
260 265 270
Asn Cys Val Gln Gly Glu Glu Lys Glu Ser Ser Asn Asp Ser Thr Ser
275 280 285
Val Ser Ala Val Ala Ser Asn Met Arg Asp Asp Glu Ile Thr Gln Asp
290 295 300
Glu Asn Thr Val Ser Thr Ser Leu Gly His Ser Lys Asp Glu Asn Ser
305 310 315 320
Lys Gln Thr Cys Ile Arg Ile Gly Thr Lys Thr Pro Lys Ser Asp Ser
325 330 335
Cys Thr Pro Thr Asn Thr Thr Val Glu Val Val Gly Ser Ser Gly Gln
340 345 350
Asn Gly Asp Glu Lys Gln Asn Ile Val Ala Arg Lys Ile Val Lys Met
355 360 365
Thr Lys Gln Pro Ala Lys Lys Lys Pro Pro Pro Ser Arg Glu Lys Lys
370 375 380
Val Lys Arg Thr Ile Leu Ala Ile Leu Leu Ala Phe Ile Ile Thr Trp
385 390 395 400
Ala Pro Tyr Asn Val Met Val Leu Ile Asn Thr Phe Cys Ala Pro Cys
405 410 415
Ile Pro Asn Thr Val Trp Thr Ile Gly Tyr Trp Leu Cys Tyr Ile Asn
420 425 430
Ser Thr Ile Asn Pro Ala Cys Tyr Ala Leu Cys Asn Ala Thr Phe Lys
435 440 445
Lys Thr Phe Lys His Leu Leu Met Cys His Tyr Lys Asn Ile Gly Ala
450 455 460
Thr Arg
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<210> 516
<211> 1773
<212> DNA
<213> Homo sapiens

<400> 516
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tgccagtgtg acaaaaaaaa gaggcgcaag cagcagtacc agcagagaca gtcggtcatt 1740
tttcacaagc ggcgacccga gcaggccttg tag 1773

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<210> 517
 <211> 590
 <212> PRT
 <213> Homo sapiens

<400> 517
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 20 25 30
 Thr Val Thr His Phe Gly Ser Tyr Asn Val Ser Arg Ala Ala Gly Asn
 35 40 45
 Phe Ser Ser Pro Asp Gly Thr Thr Asp Asp Pro Leu Gly Gly His Thr
 50 55 60
 Val Trp Gln Val Val Phe Ile Ala Phe Leu Thr Gly Ile Leu Ala Leu
 65 70 75 80
 Val Thr Ile Ile Gly Asn Ile Leu Val Ile Val Ser Phe Lys Val Asn
 85 90 95
 Lys Gln Leu Lys Thr Val Asn Asn Tyr Phe Leu Leu Ser Leu Ala Cys
 100 105 110
 Ala Asp Leu Ile Ile Gly Val Ile Ser Met Asn Leu Phe Thr Thr Tyr
 115 120 125
 Ile Ile Met Asn Arg Trp Ala Leu Gly Asn Leu Ala Cys Asp Leu Trp

130					135					140					
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145					150					155					160
Val	Ile	Ser	Phe	Asp	Arg	Tyr	Phe	Ser	Ile	Thr	Arg	Pro	Leu	Thr	Tyr
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Arg	Ala	Lys	Arg	Thr	Thr	Lys	Arg	Ala	Gly	Val	Met	Ile	Gly	Leu	Ala
			180					185					190		
Trp	Val	Ile	Ser	Phe	Val	Leu	Trp	Ala	Pro	Ala	Ile	Leu	Phe	Trp	Gln
		195					200					205			
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	210					215					220				
Phe	Leu	Ser	Glu	Pro	Thr	Ile	Thr	Phe	Gly	Thr	Ala	Ile	Ala	Ala	Phe
225						230					235				240
Tyr	Met	Pro	Val	Thr	Ile	Met	Thr	Ile	Leu	Tyr	Trp	Arg	Ile	Tyr	Lys
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			260					265					270		
Thr	Glu	Ala	Glu	Thr	Glu	Asn	Phe	Val	His	Pro	Thr	Gly	Ser	Ser	Arg
		275					280					285			
Ser	Cys	Ser	Ser	Tyr	Glu	Leu	Gln	Gln	Gln	Ser	Met	Lys	Arg	Ser	Asn
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Arg	Arg	Lys	Tyr	Gly	Arg	Cys	His	Phe	Trp	Phe	Thr	Thr	Lys	Ser	Trp
305						310					315				320
Lys	Pro	Ser	Ser	Glu	Gln	Met	Asp	Gln	Asp	His	Ser	Ser	Ser	Asp	Ser
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Trp	Asn	Asn	Asn	Asp	Ala	Ala	Ala	Ser	Leu	Glu	Asn	Ser	Ala	Ser	Ser
			340					345					350		
Asp	Glu	Glu	Asp	Ile	Gly	Ser	Glu	Thr	Arg	Ala	Ile	Tyr	Ser	Ile	Val
		355					360					365			
Leu	Lys	Leu	Pro	Gly	His	Ser	Thr	Ile	Leu	Asn	Ser	Thr	Lys	Leu	Pro
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Ser	Ser	Asp	Asn	Leu	Gln	Val	Pro	Glu	Glu	Glu	Leu	Gly	Met	Val	Asp
385						390					395				400
Leu	Glu	Arg	Lys	Ala	Asp	Lys	Leu	Gln	Ala	Gln	Lys	Ser	Val	Asp	Asp
				405					410					415	
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435

440

445

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Met Ser Leu Val Lys Glu Lys Lys Ala Lys Gln Thr Leu Ser Ala Ile
485 490 495

Leu Leu Ala Phe Ile Ile Thr Trp Thr Pro Tyr Asn Ile Met Val Leu
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Val Asn Thr Phe Cys Asp Ser Cys Ile Pro Lys Thr Phe Trp Asn Leu
515 520 525

Gly Tyr Trp Leu Cys Tyr Ile Asn Ser Thr Val Asn Pro Val Cys Tyr
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Ala Leu Cys Asn Lys Thr Phe Arg Thr Thr Phe Lys Met Leu Leu Leu
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Cys Gln Cys Asp Lys Lys Lys Arg Arg Lys Gln Gln Tyr Gln Gln Arg
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<211> 1440

<212> DNA

<213> Homo sapiens

<400> 518

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 <212> PRT
 <213> Homo sapiens

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 35 40 45
 Gly Asn Ile Leu Val Met Leu Ser Ile Lys Val Asn Arg Gln Leu Gln
 50 55 60
 Thr Val Asn Asn Tyr Phe Leu Phe Ser Leu Ala Cys Ala Asp Leu Ile
 65 70 75 80
 Ile Gly Ala Phe Ser Met Asn Leu Tyr Thr Val Tyr Ile Ile Lys Gly
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 Tyr Trp Pro Leu Gly Ala Val Val Cys Asp Leu Trp Leu Ala Leu Asp
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 Tyr Val Val Ser Asn Ala Ser Val Met Asn Leu Leu Ile Ile Ser Phe
 115 120 125
 Asp Arg Tyr Phe Cys Val Thr Lys Pro Leu Thr Tyr Pro Ala Arg Arg
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 Thr Thr Lys Met Ala Gly Leu Met Ile Ala Ala Ala Trp Val Leu Ser
 145 150 155 160
 Phe Val Leu Trp Ala Pro Ala Ile Leu Phe Trp Gln Phe Val Val Gly
 165 170 175
 Lys Arg Thr Val Pro Asp Asn Gln Cys Phe Ile Gln Phe Leu Ser Asn
 180 185 190
 Pro Ala Val Thr Phe Gly Thr Ala Ile Ala Ala Phe Tyr Leu Pro Val
 195 200 205
 Val Ile Met Thr Val Leu Tyr Ile His Ile Ser Leu Ala Ser Arg Ser
 210 215 220
 Arg Val His Lys His Arg Pro Glu Gly Pro Lys Glu Lys Lys Ala Lys
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104-10360-10000

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<210> 521
<211> 532
<212> PRT
<213> Homo sapiens

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Val Asn His Gln Pro Leu Glu Arg His Arg Leu Trp Glu Val Ile Thr
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Ile Ala Ala Val Thr Ala Val Val Ser Leu Ile Thr Ile Val Gly Asn
          35                      40                      45

Val Leu Val Met Ile Ser Phe Lys Val Asn Ser Gln Leu Lys Thr Val
          50                      55                      60

Asn Asn Tyr Tyr Leu Leu Ser Leu Ala Cys Ala Asp Leu Ile Ile Gly
          65                      70                      75                      80

Ile Phe Ser Met Asn Leu Tyr Thr Thr Tyr Ile Leu Met Gly Arg Trp
          85                      90                      95

Ala Leu Gly Ser Leu Ala Cys Asp Leu Trp Leu Ala Leu Asp Tyr Val
          100                      105                      110

Ala Ser Asn Ala Ser Val Met Asn Leu Leu Val Ile Ser Phe Asp Arg
          115                      120                      125

Tyr Phe Ser Ile Thr Arg Pro Leu Thr Tyr Arg Ala Lys Arg Thr Pro
          130                      135                      140

Lys Arg Ala Gly Ile Met Ile Gly Leu Ala Trp Leu Ile Ser Phe Ile

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Thr Val Pro Leu	Asp Glu Cys Gln Ile Gln Phe Leu Ser Glu Pro Thr					
	180	185			190	
Ile Thr Phe Gly Thr	Ala Ile Ala Ala Phe Tyr Ile Pro Val Ser Val					
	195	200			205	
Met Thr Ile Leu Tyr Cys Arg	Ile Tyr Arg Glu Thr Glu Lys Arg Thr					
	210	215		220		
Lys Asp Leu Ala Asp Leu Gln Gly Ser Asp Ser Val Thr Lys Ala Glu						
225	230		235			240
Lys Arg Lys Pro Ala His Arg Ala Leu Phe Arg Ser Cys Leu Arg Cys						
	245		250			255
Pro Arg Pro Thr Leu Ala Gln Arg Glu Arg Asn Gln Ala Ser Trp Ser						
	260		265			270
Ser Ser Arg Arg Ser Thr Ser Thr Thr Gly Lys Pro Ser Gln Ala Thr						
	275		280			285
Gly Pro Ser Ala Asn Trp Ala Lys Ala Glu Gln Leu Thr Thr Cys Ser						
	290		295			300
Ser Tyr Pro Ser Ser Glu Asp Glu Asp Lys Pro Ala Thr Asp Pro Val						
305	310		315			320
Leu Gln Val Val Tyr Lys Ser Gln Gly Lys Glu Ser Pro Gly Glu Glu						
	325		330			335
Phe Ser Ala Glu Glu Thr Glu Glu Thr Phe Val Lys Ala Glu Thr Glu						
	340		345			350
Lys Ser Asp Tyr Asp Thr Pro Asn Tyr Leu Leu Ser Pro Ala Ala Ala						
	355		360			365
His Arg Pro Lys Ser Gln Lys Cys Val Ala Tyr Lys Phe Arg Leu Val						
	370		375			380
Val Lys Ala Asp Gly Asn Gln Glu Thr Asn Asn Gly Cys His Lys Val						
385	390		395			400
Lys Ile Met Pro Cys Pro Phe Pro Val Ala Lys Glu Pro Ser Thr Lys						
	405		410			415
Gly Leu Asn Pro Asn Pro Ser His Gln Met Thr Lys Arg Lys Arg Val						
	420		425			430
Val Leu Val Lys Glu Arg Lys Ala Lys Gln Thr Leu Ser Ala Ile Leu						
	435		440			445
Leu Ala Phe Ile Ile Thr Trp Thr Pro Tyr Asn Ile Met Val Leu Val						

450

455

460

Ser Thr Phe Cys Asp Lys Cys Val Pro Val Thr Leu Trp His Leu Gly
 465 470 475 480

Tyr Trp Leu Cys Tyr Val Asn Ser Thr Val Asn Pro Ile Cys Tyr Ala
 485 490 495

Leu Cys Asn Arg Thr Phe Arg Lys Thr Phe Lys Met Leu Leu Leu Cys
 500 505 510

Arg Trp Lys Lys Lys Lys Val Glu Glu Lys Leu Tyr Trp Gln Gly Asn
 515 520 525

Ser Lys Leu Pro
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<210> 522

<211> 972

<212> DNA

<213> Homo sapiens

<400> 522

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<211> 323

<212> PRT

<213> Homo sapiens

<400> 523

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Gly Ser Glu His Leu Gln Ala Pro Phe Phe Ser Asn Gln Ser Ser Ser
 20 25 30

Ala Phe Cys Glu Gln Val Phe Ile Lys Pro Glu Ile Phe Leu Ser Leu
 35 40 45

Gly Ile Val Ser Leu Leu Glu Asn Ile Leu Val Ile Leu Ala Val Val
50 55 60

Arg Asn Gly Asn Leu His Ser Pro Met Tyr Phe Phe Leu Cys Ser Leu
65 70 75 80

Ala Val Ala Asp Met Leu Val Ser Val Ser Asn Ala Leu Glu Thr Ile
85 90 95

Met Ile Ala Ile Val His Ser Asp Tyr Leu Thr Phe Glu Asp Gln Phe
100 105 110

Ile Gln His Met Asp Asn Ile Phe Asp Ser Met Ile Cys Ile Ser Leu
115 120 125

Val Ala Ser Ile Cys Asn Leu Leu Ala Ile Ala Val Asp Arg Tyr Val
130 135 140

Thr Ile Phe Tyr Ala Leu Arg Tyr His Ser Ile Met Thr Val Arg Lys
145 150 155 160

Ala Leu Thr Leu Ile Val Ala Ile Trp Val Cys Cys Gly Val Cys Gly
165 170 175

Val Val Phe Ile Val Tyr Ser Glu Ser Lys Met Val Ile Val Cys Leu
180 185 190

Ile Thr Met Phe Phe Ala Met Met Leu Leu Met Gly Thr Leu Tyr Val
195 200 205

His Met Phe Leu Phe Ala Arg Leu His Val Lys Arg Ile Ala Ala Leu
210 215 220

Pro Pro Ala Asp Gly Val Ala Pro Gln Gln His Ser Cys Met Lys Gly
225 230 235 240

Lys Val Thr Ile Thr Ile Leu Leu Gly Val Phe Ile Phe Cys Trp Ala
245 250 255

Pro Phe Phe Leu His Leu Val Leu Ile Ile Thr Cys Pro Thr Asn Pro
260 265 270

Tyr Cys Ile Cys Tyr Thr Ala His Phe Asn Thr Tyr Leu Val Leu Ile
275 280 285

Met Cys Asn Ser Val Ile Asp Pro Leu Ile Tyr Ala Phe Arg Ser Leu
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Glu Leu Arg Asn Thr Phe Arg Glu Ile Leu Cys Gly Cys Asn Gly Met
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Asn Leu Gly

<210> 524

<211> 1224
 <212> DNA
 <213> Homo sapiens

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 <211> 407
 <212> PRT
 <213> Homo sapiens

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 Val Leu Trp Ala Ala Ala Tyr Thr Val Ile Val Val Thr Ser Val Val
 35 40 45
 Gly Asn Val Val Val Met Trp Ile Ile Leu Ala His Lys Arg Met Arg
 50 55 60
 Thr Val Thr Asn Tyr Phe Leu Val Asn Leu Ala Phe Ala Glu Ala Ser
 65 70 75 80
 Met Ala Ala Phe Asn Thr Val Val Asn Phe Thr Tyr Ala Val His Asn
 85 90 95
 Glu Trp Tyr Tyr Gly Leu Phe Tyr Cys Lys Phe His Asn Phe Phe Pro
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 Ile Ala Ala Val Phe Ala Ser Ile Tyr Ser Met Thr Ala Val Ala Phe
 115 120 125

<211> 1197
 <212> DNA
 <213> Homo sapiens

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 <211> 398
 <212> PRT
 <213> Homo sapiens

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 Thr Gly Asn Ala Ile Val Ile Trp Ile Ile Leu Ala His Arg Arg Met
 50 55 60
 Arg Thr Val Thr Asn Tyr Phe Ile Val Asn Leu Ala Leu Ala Asp Leu
 65 70 75 80
 Cys Met Ala Ala Phe Asn Ala Ala Phe Asn Phe Val Tyr Ala Ser His
 85 90 95
 Asn Ile Trp Tyr Phe Gly Arg Ala Phe Cys Tyr Phe Gln Asn Leu Phe
 100 105 110
 Pro Ile Thr Ala Met Phe Val Ser Ile Tyr Ser Met Thr Ala Ile Ala
 115 120 125

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Ala	Leu	Ala	Ser	Pro	Gln	Cys	Phe	Tyr	Ser	Thr	Val	Thr	Met	Asp	Gln	165	170	175
Gly	Ala	Thr	Lys	Cys	Val	Val	Ala	Trp	Pro	Glu	Asp	Ser	Gly	Gly	Lys	180	185	190
Thr	Leu	Leu	Leu	Tyr	His	Leu	Val	Val	Ile	Ala	Leu	Ile	Tyr	Phe	Leu	195	200	205
Pro	Leu	Ala	Val	Met	Phe	Val	Ala	Tyr	Ser	Val	Ile	Gly	Leu	Thr	Leu	210	215	220
Trp	Arg	Arg	Ala	Val	Pro	Gly	His	Gln	Ala	His	Gly	Ala	Asn	Leu	Arg	225	230	235
His	Leu	Gln	Ala	Lys	Lys	Lys	Phe	Lys	Lys	Thr	Met	Val	Leu	Val	Val	245	250	255
Leu	Thr	Phe	Ala	Ile	Cys	Trp	Leu	Pro	Tyr	His	Leu	Tyr	Phe	Ile	Leu	260	265	270
Gly	Ser	Phe	Gln	Glu	Asp	Ile	Tyr	Cys	His	Lys	Phe	Ile	Gln	Gln	Val	275	280	285
Tyr	Leu	Ala	Leu	Phe	Trp	Leu	Ala	Met	Ser	Ser	Thr	Met	Tyr	Asn	Pro	290	295	300
Ile	Ile	Tyr	Cys	Cys	Leu	Asn	His	Arg	Phe	Arg	Ser	Gly	Phe	Arg	Leu	305	310	315
Ala	Phe	Arg	Cys	Cys	Pro	Trp	Val	Thr	Pro	Thr	Lys	Glu	Asp	Lys	Leu	325	330	335
Glu	Leu	Thr	Pro	Thr	Thr	Ser	Leu	Ser	Thr	Arg	Val	Asn	Arg	Cys	His	340	345	350
Thr	Lys	Glu	Thr	Leu	Phe	Met	Ala	Gly	Asp	Thr	Ala	Pro	Ser	Glu	Ala	355	360	365
Thr	Ser	Gly	Glu	Ala	Gly	Arg	Pro	Gln	Asp	Gly	Ser	Gly	Leu	Trp	Phe	370	375	380
Gly	Tyr	Gly	Leu	Leu	Ala	Pro	Thr	Lys	Thr	His	Val	Glu	Ile			385	390	395

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 <212> DNA
 <213> Homo sapiens

<400> 528

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<210> 529

<211> 465

<212> PRT

<213> Homo sapiens

<400> 529

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Val Gly Ala Asp Ala Val Asn Leu Thr Ala Ser Leu Ala Ala Gly Ala
      20              25              30

Ala Thr Gly Ala Val Glu Thr Gly Trp Leu Gln Leu Leu Asp Gln Ala
      35              40              45

Gly Asn Leu Ser Ser Ser Pro Ser Ala Leu Gly Leu Pro Val Ala Ser
      50              55              60

Pro Ala Pro Ser Gln Pro Trp Ala Asn Leu Thr Asn Gln Phe Val Gln
      65              70              75              80

Pro Ser Trp Arg Ile Ala Leu Trp Ser Leu Ala Tyr Gly Val Val Val
      85              90              95

Ala Val Ala Val Leu Gly Asn Leu Ile Val Ile Trp Ile Ile Leu Ala
      100             105             110

His Lys Arg Met Arg Thr Val Thr Asn Tyr Phe Leu Val Asn Leu Ala
      115             120             125

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Asp Pro Ser Phe Asn Gly Cys Ser Arg Arg Asn Ser Lys Ser Ala Ser
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Ala Thr Ser Ser Phe Ile Ser Ser Pro Tyr Thr Ser Val Asp Glu Tyr
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Ser
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 <213> Homo sapiens

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 aacatcatgc tggatgaagat cttcatcacc aacagcgcca tgaggagcgt ccccaacatc 240
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 <212> PRT
 <213> Homo sapiens

<400> 531
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 35 40 45
 Leu Tyr Leu Leu Ile Ile Thr Val Gly Leu Leu Gly Asn Ile Met Leu
 50 55 60
 Val Lys Ile Phe Ile Thr Asn Ser Ala Met Arg Ser Val Pro Asn Ile

65					70					75					80
Phe	Ile	Ser	Asn	Leu	Ala	Ala	Gly	Asp	Leu	Leu	Leu	Leu	Leu	Thr	Cys
				85					90					95	
Val	Pro	Val	Asp	Ala	Ser	Arg	Tyr	Phe	Phe	Asp	Glu	Trp	Met	Phe	Gly
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Lys	Val	Gly	Cys	Lys	Leu	Ile	Pro	Val	Ile	Gln	Leu	Thr	Ser	Val	Gly
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Val	Ser	Val	Phe	Thr	Leu	Thr	Ala	Leu	Ser	Ala	Asp	Arg	Tyr	Arg	Ala
	130					135					140				
Ile	Val	Asn	Pro	Met	Asp	Met	Gln	Thr	Ser	Gly	Ala	Leu	Leu	Arg	Thr
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Cys	Val	Lys	Ala	Met	Gly	Ile	Trp	Val	Val	Ser	Val	Leu	Leu	Ala	Val
				165					170					175	
Pro	Glu	Ala	Val	Phe	Ser	Glu	Val	Ala	Arg	Ile	Ser	Ser	Leu	Asp	Asn
			180					185					190		
Ser	Ser	Phe	Thr	Ala	Cys	Ile	Pro	Tyr	Pro	Gln	Thr	Asp	Glu	Leu	His
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Pro	Lys	Ile	His	Ser	Val	Leu	Ile	Phe	Leu	Val	Tyr	Phe	Leu	Ile	Pro
	210					215					220				
Leu	Ala	Ile	Ile	Ser	Ile	Tyr	Tyr	Tyr	His	Ile	Ala	Lys	Thr	Leu	Ile
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Lys	Ser	Ala	His	Asn	Leu	Pro	Gly	Glu	Tyr	Asn	Glu	His	Thr	Lys	Lys
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Gln	Met	Glu	Thr	Arg	Lys	Arg	Leu	Lys	Lys	Ile	Val	Leu	Val	Phe	Val
			260					265					270		
Gly	Cys	Phe	Ile	Phe	Cys	Trp	Phe	Pro	Asn	His	Ile	Leu	Tyr	Met	Tyr
		275					280					285			
Arg	Ser	Phe	Asn	Tyr	Asn	Glu	Ile	Asp	Pro	Ser	Leu	Gly	His	Met	Ile
	290					295					300				
Val	Thr	Leu	Val	Ala	Arg	Val	Leu	Ser	Phe	Gly	Asn	Ser	Cys	Val	Asn
305					310					315				320	
Pro	Phe	Ala	Leu	Tyr	Leu	Leu	Ser	Glu	Ser	Phe	Arg	Arg	His	Phe	Asn
				325					330					335	
Ser	Gln	Leu	Cys	Cys	Gly	Arg	Lys	Ser	Tyr	Gln	Glu	Arg	Gly	Thr	Ser
			340					345					350		
Tyr	Leu	Leu	Ser	Ser	Ser	Ala	Val	Arg	Met	Thr	Ser	Leu	Lys	Ser	Asn
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370

375

380

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385 390

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<212> DNA
<213> Homo sapiens

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<211> 445
<212> PRT
<213> Homo sapiens

<400> 533
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Tyr Lys Ser Ser Val Asp Asp Leu Gln Tyr Phe Leu Ile Gly Leu Tyr
35 40 45
Thr Phe Val Ser Leu Leu Gly Phe Met Gly Asn Leu Leu Ile Leu Met
50 55 60
Ala Leu Met Lys Lys Arg Asn Gln Lys Thr Thr Val Asn Phe Leu Ile
65 70 75 80

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His Leu Phe His Val Val Thr Asp Phe Asn Asp Asn Leu Ile Ser Asn
385 390 395 400

Arg His Phe Lys Leu Val Tyr Cys Ile Cys His Leu Leu Gly Met Met
405 410 415

Ser Cys Cys Leu Asn Pro Ile Leu Tyr Gly Phe Leu Asn Asn Gly Ile
420 425 430

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435 440 445

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<211> 1257
<212> DNA
<213> Homo sapiens

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<211> 418
<212> PRT
<213> Homo sapiens

<400> 535
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Pro Gly Phe Gly Asn Ala Ser Gly Asn Ala Ser Glu Arg Val Leu Ala
35 40 45

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Asn	Thr	Val	Thr	Ala	Phe	Thr	Leu	Ala	Arg	Lys	Lys	Ser	Leu	Gln	Ser
				85					90					95	
Leu	Gln	Ser	Thr	Val	His	Tyr	His	Leu	Gly	Ser	Leu	Ala	Leu	Ser	Asp
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Lys	Thr	Leu	Met	Ser	Arg	Ser	Arg	Thr	Lys	Lys	Phe	Ile	Ser	Ala	Ile
			180					185					190		
Trp	Leu	Ala	Ser	Ala	Leu	Leu	Thr	Val	Pro	Met	Leu	Phe	Thr	Met	Gly
		195					200					205			
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	210					215					220				
Thr	Pro	Thr	Ile	His	Thr	Ala	Thr	Val	Lys	Val	Val	Ile	Gln	Val	Asn
225					230					235					240
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Thr	Ile	Ile	Ala	Asn	Lys	Leu	Thr	Val	Met	Val	Arg	Gln	Ala	Ala	Glu
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Ala	Ile	Glu	Pro	Gly	Arg	Val	Gln	Ala	Leu	Arg	His	Gly	Lys	Arg	Val
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Leu	Arg	Ala	Val	Val	Ile	Ala	Phe	Val	Val	Cys	Trp	Leu	Pro	Tyr	His
305					310					315					320
Val	Arg	Arg	Leu	Met	Phe	Cys	Tyr	Ile	Ser	Asp	Glu	Gln	Trp	Thr	Pro
				325					330					335	
Phe	Leu	Tyr	Asp	Phe	Tyr	His	Tyr	Phe	Tyr	Met	Val	Thr	Asn	Ala	Leu
			340					345					350		

Phe Tyr Val Ser Ser Thr Ile Asn Pro Ile Leu Tyr Asn Leu Val Ser
 355 360 365

Ala Asn Phe Arg His Ile Phe Leu Ala Thr Leu Ala Cys Leu Cys Pro
 370 375 380

Val Trp Arg Arg Arg Arg Lys Arg Pro Ala Phe Ser Arg Lys Ala Asp
 385 390 395 400

Ser Val Ser Ser Asn His Thr Leu Ser Ser Asn Ala Thr Arg Glu Thr
 405 410 415

Leu Tyr

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 <212> DNA
 <213> Homo sapiens

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 <211> 410
 <212> PRT
 <213> Homo sapiens

<400> 537
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 20 25 30

SECRET

His Tyr Phe Tyr Met Val Thr Asn Thr Leu Phe Tyr Val Ser Ser Ala
340 345 350

Val Thr Pro Leu Leu Tyr Asn Ala Val Ser Ser Ser Phe Arg Lys Leu
355 360 365

Phe Leu Glu Ala Val Ser Ser Leu Cys Gly Glu His His Pro Met Lys
370 375 380

Arg Leu Pro Pro Lys Pro Gln Ser Pro Thr Leu Met Asp Thr Ala Ser
385 390 395 400

Gly Phe Gly Asp Pro Pro Glu Thr Arg Thr
405 410

<210> 538
<211> 1119
<212> DNA
<213> Homo sapiens

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gccttcgttg tgcccatcct catcatcacc gtgtgctatg gcctcatgct gctgcgctg 720
cgcatgtgct gcctgctgtc gggctccaag gagaaggacc gcagcctgcg gcgcatcaag 780
cgcatggtgc tgggtggtgt gggcgccctc gtggtgtgtt gggcgcccat ccacatcttc 840
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cacctgtgca tcgcgctggg ctacgccaat agcagcctca acccgtgct ctacgcttcc 960
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acccgctccg atggtcccg cggtgccgt gccgctga 1119

<210> 539
<211> 372
<212> PRT
<213> Homo sapiens

<400> 539
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Ala Asn Ala Ser Asp Ala Tyr Pro Ser Ala Phe Pro Ser Ala Gly Ala
20 25 30
Asn Ala Ser Gly Pro Pro Gly Pro Gly Ser Ala Ser Ser Leu Ala Leu

09826509-040501

35					40					45					
Ala	Ile	Ala	Ile	Thr	Ala	Leu	Tyr	Ser	Ala	Val	Cys	Ala	Val	Gly	Leu
50					55					60					
Leu	Gly	Asn	Val	Leu	Val	Met	Phe	Gly	Ile	Val	Arg	Tyr	Thr	Lys	Met
65					70					75					80
Lys	Thr	Ala	Thr	Asn	Ile	Tyr	Ile	Phe	Asn	Leu	Ala	Leu	Ala	Asp	Ala
				85					90					95	
Leu	Ala	Thr	Ser	Thr	Leu	Pro	Phe	Gln	Ser	Ala	Lys	Tyr	Leu	Met	Glu
			100					105					110		
Thr	Trp	Pro	Phe	Gly	Glu	Leu	Leu	Cys	Lys	Ala	Val	Leu	Ser	Ile	Asp
		115					120					125			
Tyr	Tyr	Asn	Met	Phe	Thr	Ser	Ile	Phe	Thr	Leu	Thr	Met	Met	Ser	Val
	130					135					140				
Asp	Arg	Tyr	Ile	Ala	Val	Cys	His	Pro	Val	Lys	Ala	Leu	Asp	Phe	Arg
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Thr	Pro	Ala	Lys	Ala	Lys	Leu	Ile	Asn	Ile	Cys	Ile	Trp	Val	Leu	Ala
				165					170					175	
Ser	Gly	Val	Gly	Val	Pro	Ile	Met	Val	Met	Ala	Val	Thr	Arg	Pro	Arg
			180					185					190		
Asp	Gly	Ala	Val	Val	Cys	Met	Leu	Gln	Phe	Pro	Ser	Pro	Ser	Trp	Tyr
		195					200					205			
Trp	Asp	Thr	Val	Thr	Lys	Ile	Cys	Val	Phe	Leu	Phe	Ala	Phe	Val	Val
	210					215					220				
Pro	Ile	Leu	Ile	Ile	Thr	Val	Cys	Tyr	Gly	Leu	Met	Leu	Leu	Arg	Leu
225					230					235					240
Arg	Ser	Val	Arg	Leu	Leu	Ser	Gly	Ser	Lys	Glu	Lys	Asp	Arg	Ser	Leu
				245					250					255	
Arg	Arg	Ile	Lys	Arg	Met	Val	Leu	Val	Val	Val	Gly	Ala	Phe	Val	Val
			260					265					270		
Cys	Trp	Ala	Pro	Ile	His	Ile	Phe	Val	Ile	Val	Trp	Thr	Leu	Val	Asp
		275					280					285			
Ile	Asp	Arg	Arg	Asp	Pro	Leu	Val	Val	Ala	Ala	Leu	His	Leu	Cys	Ile
	290					295					300				
Ala	Leu	Gly	Tyr	Ala	Asn	Ser	Ser	Leu	Asn	Pro	Val	Leu	Tyr	Ala	Phe
305					310					315					320
Leu	Asp	Glu	Asn	Phe	Lys	Arg	Cys	Phe	Arg	Gln	Leu	Cys	Arg	Lys	Pro
				325					330					335	
Cys	Gly	Arg	Pro	Asp	Pro	Ser	Ser	Phe	Ser	Arg	Pro	Arg	Glu	Ala	Thr

340

345

350

Ala Arg Glu Arg Val Thr Ala Cys Thr Pro Ser Asp Gly Pro Gly Gly
 355 360 365

Gly Arg Ala Ala
 370

<210> 540
 <211> 1113
 <212> DNA
 <213> Homo sapiens

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 agccacggcg ccttcctgcc cctcgggctc aaggtcacca tcgtggggct ctacctggcc 180
 gtgtgtgtcg gagggctcct ggggaactgc cttgtcatgt acgtcatcct caggcacacc 240
 aaaatgaaga cagccaccaa tatttacatc tttaacctgg ccctggccga cactctggtc 300
 ctgctgacgc tgcccttcca gggcacggac atcctcctgg gcttctggcc gtttggggaat 360
 gcgctgtgca agacagtcac tgccattgac tactacaaca tggtcaccag caccttcacc 420
 ctaactgcca tgagtgtgga tcgctatgta gccatctgcc accccatccg tgccctcgac 480
 gtccgcacgt ccagcaaagc ccaggctgtc aatgtggcca tctggggcct ggcctctgtt 540
 gtcggtgttc ccgttgccat catgggctcg gcacaggctc aggatgaaga gatcgagtgc 600
 ctggtggaga tccctacccc tcaggattac tggggcccgg tgtttgccat ctgcatcttc 660
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 aagacctctg agacggtacc gcggcccgcga tga 1113

<210> 541
 <211> 370
 <212> PRT
 <213> Homo sapiens

<400> 541
 Met Glu Pro Leu Phe Pro Ala Pro Phe Trp Glu Val Ile Tyr Gly Ser
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 His Leu Gln Gly Asn Leu Ser Leu Leu Ser Pro Asn His Ser Leu Leu
 20 25 30
 Pro Pro His Leu Leu Leu Asn Ala Ser His Gly Ala Phe Leu Pro Leu
 35 40 45
 Gly Leu Lys Val Thr Ile Val Gly Leu Tyr Leu Ala Val Cys Val Gly
 50 55 60
 Gly Leu Leu Gly Asn Cys Leu Val Met Tyr Val Ile Leu Arg His Thr
 65 70 75 80

Lys	Met	Lys	Thr	Ala	Thr	Asn	Ile	Tyr	Ile	Phe	Asn	Leu	Ala	Leu	Ala	85	90	95
Asp	Thr	Leu	Val	Leu	Leu	Thr	Leu	Pro	Phe	Gln	Gly	Thr	Asp	Ile	Leu	100	105	110
Leu	Gly	Phe	Trp	Pro	Phe	Gly	Asn	Ala	Leu	Cys	Lys	Thr	Val	Ile	Ala	115	120	125
Ile	Asp	Tyr	Tyr	Asn	Met	Phe	Thr	Ser	Thr	Phe	Thr	Leu	Thr	Ala	Met	130	135	140
Ser	Val	Asp	Arg	Tyr	Val	Ala	Ile	Cys	His	Pro	Ile	Arg	Ala	Leu	Asp	145	150	155
Val	Arg	Thr	Ser	Ser	Lys	Ala	Gln	Ala	Val	Asn	Val	Ala	Ile	Trp	Ala	165	170	175
Leu	Ala	Ser	Val	Val	Gly	Val	Pro	Val	Ala	Ile	Met	Gly	Ser	Ala	Gln	180	185	190
Val	Glu	Asp	Glu	Glu	Ile	Glu	Cys	Leu	Val	Glu	Ile	Pro	Thr	Pro	Gln	195	200	205
Asp	Tyr	Trp	Gly	Pro	Val	Phe	Ala	Ile	Cys	Ile	Phe	Leu	Phe	Ser	Phe	210	215	220
Ile	Val	Pro	Val	Leu	Val	Ile	Ser	Val	Cys	Tyr	Ser	Leu	Met	Ile	Arg	225	230	235
Arg	Leu	Arg	Gly	Val	Arg	Leu	Leu	Ser	Gly	Ser	Arg	Glu	Lys	Asp	Arg	245	250	255
Asn	Leu	Arg	Arg	Ile	Lys	Arg	Leu	Val	Leu	Val	Val	Val	Ala	Val	Phe	260	265	270
Val	Gly	Cys	Trp	Thr	Pro	Val	Gln	Val	Phe	Val	Leu	Ala	Gln	Gly	Leu	275	280	285
Gly	Val	Gln	Pro	Ser	Ser	Glu	Thr	Ala	Val	Ala	Ile	Leu	Arg	Phe	Cys	290	295	300
Thr	Ala	Leu	Gly	Tyr	Val	Asn	Ser	Cys	Leu	Asn	Pro	Ile	Leu	Tyr	Ala	305	310	315
Phe	Leu	Asp	Glu	Asn	Phe	Lys	Ala	Cys	Phe	Arg	Lys	Phe	Cys	Cys	Ala	325	330	335
Ser	Ala	Leu	Arg	Arg	Asp	Val	Gln	Val	Ser	Asp	Arg	Val	Arg	Ser	Ile	340	345	350
Ala	Lys	Asp	Val	Ala	Leu	Ala	Cys	Lys	Thr	Ser	Glu	Thr	Val	Pro	Arg	355	360	365
Pro	Ala															370		

<210> 542
 <211> 1143
 <212> DNA
 <213> Homo sapiens

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 aacatgttca ccagcatctt caccttgacc atgatgagcg tggaccgcta cattgccgtg 480
 tgccaccccc tgaaggcttt ggacttccgc acacccttga aggcaaagat catcaatatc 540
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 gtcagggaag acgtcgatgt cattgagtgc tccttgcaat tcccagatga tgactactcc 660
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 tga 1143

<210> 543
 <211> 380
 <212> PRT
 <213> Homo sapiens

<400> 543
 Met Glu Ser Pro Ile Gln Ile Phe Arg Gly Glu Pro Gly Pro Thr Cys
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 Ala Pro Ser Ala Cys Leu Pro Pro Asn Ser Ser Ala Trp Phe Pro Gly
 20 25 30
 Trp Ala Glu Pro Asp Ser Asn Gly Ser Ala Gly Ser Glu Asp Ala Gln
 35 40 45
 Leu Glu Pro Ala His Ile Ser Pro Ala Ile Pro Val Ile Ile Thr Ala
 50 55 60
 Val Tyr Ser Val Val Phe Val Val Gly Leu Val Gly Asn Ser Leu Val
 65 70 75 80
 Met Phe Val Ile Ile Arg Tyr Thr Lys Met Lys Thr Ala Thr Asn Ile
 85 90 95
 Tyr Ile Phe Asn Leu Ala Leu Ala Asp Ala Leu Val Thr Thr Thr Met
 100 105 110
 Pro Phe Gln Ser Thr Val Tyr Leu Met Asn Ser Trp Pro Phe Gly Asp

115					120					125					
Val	Leu	Cys	Lys	Ile	Val	Ile	Ser	Ile	Asp	Tyr	Tyr	Asn	Met	Phe	Thr
130					135					140					
Ser	Ile	Phe	Thr	Leu	Thr	Met	Met	Ser	Val	Asp	Arg	Tyr	Ile	Ala	Val
145					150					155					160
Cys	His	Pro	Val	Lys	Ala	Leu	Asp	Phe	Arg	Thr	Pro	Leu	Lys	Ala	Lys
				165					170					175	
Ile	Ile	Asn	Ile	Cys	Ile	Trp	Leu	Leu	Ser	Ser	Ser	Val	Gly	Ile	Ser
			180					185					190		
Ala	Ile	Val	Leu	Gly	Gly	Thr	Lys	Val	Arg	Glu	Asp	Val	Asp	Val	Ile
		195					200					205			
Glu	Cys	Ser	Leu	Gln	Phe	Pro	Asp	Asp	Asp	Tyr	Ser	Trp	Trp	Asp	Leu
	210					215					220				
Phe	Met	Lys	Ile	Cys	Val	Phe	Ile	Phe	Ala	Phe	Val	Ile	Pro	Val	Leu
225					230					235					240
Ile	Ile	Ile	Val	Cys	Tyr	Thr	Leu	Met	Ile	Leu	Arg	Leu	Lys	Ser	Val
			245						250					255	
Arg	Leu	Leu	Ser	Gly	Ser	Arg	Glu	Lys	Asp	Arg	Asn	Leu	Arg	Arg	Ile
			260					265					270		
Lys	Arg	Leu	Val	Leu	Val	Val	Val	Ala	Val	Phe	Val	Val	Cys	Trp	Thr
		275					280					285			
Pro	Ile	His	Ile	Phe	Ile	Leu	Val	Glu	Ala	Leu	Gly	Ser	Thr	Ser	His
	290					295					300				
Ser	Thr	Ala	Ala	Leu	Ser	Ser	Tyr	Tyr	Phe	Cys	Ile	Ala	Leu	Gly	Tyr
305					310					315					320
Thr	Asn	Ser	Ser	Leu	Asn	Pro	Ile	Leu	Tyr	Ala	Phe	Leu	Asp	Glu	Asn
				325					330					335	
Phe	Lys	Arg	Cys	Phe	Arg	Asp	Phe	Cys	Phe	Pro	Leu	Lys	Met	Arg	Met
			340					345					350		
Glu	Arg	Gln	Ser	Thr	Ser	Arg	Val	Arg	Asn	Thr	Val	Gln	Asp	Pro	Ala
		355					360					365			
Tyr	Leu	Arg	Asp	Ile	Asp	Gly	Met	Asn	Lys	Pro	Val				
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<210> 544
 <211> 1203
 <212> DNA
 <213> Homo sapiens
 <400> 544

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ccgaccggca gtccttccat gatcacggcc atcacgatca tggccctcta ctccatcgtg 240
tgcggtggtg ggctcttcgg aaacttcctg gtcattgtatg tgattgtcag atacaccaag 300
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taa 1203

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<210> 545
<211> 400
<212> PRT
<213> Homo sapiens

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<400> 545
Met Asp Ser Ser Ala Ala Pro Thr Asn Ala Ser Asn Cys Thr Asp Ala
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Leu Ala Tyr Ser Ser Cys Ser Pro Ala Pro Ser Pro Gly Ser Trp Val
          20              25              30

Asn Leu Ser His Leu Asp Gly Asn Leu Ser Asp Pro Cys Gly Pro Asn
  35              40              45

Arg Thr Asn Leu Gly Gly Arg Asp Ser Leu Cys Pro Pro Thr Gly Ser
  50              55              60

Pro Ser Met Ile Thr Ala Ile Thr Ile Met Ala Leu Tyr Ser Ile Val
  65              70              75              80

Cys Val Val Gly Leu Phe Gly Asn Phe Leu Val Met Tyr Val Ile Val
          85              90              95

Arg Tyr Thr Lys Met Lys Thr Ala Thr Asn Ile Tyr Ile Phe Asn Leu
 100              105              110

Ala Leu Ala Asp Ala Leu Ala Thr Ser Thr Leu Pro Phe Gln Ser Val
 115              120              125

Asn Tyr Leu Met Gly Thr Trp Pro Phe Gly Thr Ile Leu Cys Lys Ile
 130              135              140

Val Ile Ser Ile Asp Tyr Tyr Asn Met Phe Thr Ser Ile Phe Thr Leu

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105040-50392860

145		150		155		160
Cys Thr Met Ser Val Asp Arg Tyr Ile Ala Val Cys His Pro Val Lys						
		165		170		175
Ala Leu Asp Phe Arg Thr Pro Arg Asn Ala Lys Ile Ile Asn Val Cys						
		180		185		190
Asn Trp Ile Leu Ser Ser Ala Ile Gly Leu Pro Val Met Phe Met Ala						
		195		200		205
Thr Thr Lys Tyr Arg Gln Gly Ser Ile Asp Cys Thr Leu Thr Phe Ser						
		210		215		220
His Pro Thr Trp Tyr Trp Glu Asn Leu Val Lys Ile Cys Val Phe Ile						
		225		230		235
Phe Ala Phe Ile Met Pro Val Leu Ile Ile Thr Val Cys Tyr Gly Leu						
		245		250		255
Met Ile Leu Arg Leu Lys Ser Val Arg Met Leu Ser Gly Ser Lys Glu						
		260		265		270
Lys Asp Arg Asn Leu Arg Arg Ile Lys Arg Met Val Leu Val Val Val						
		275		280		285
Ala Val Phe Ile Val Cys Trp Thr Pro Ile His Ile Tyr Val Ile Ile						
		290		295		300
Lys Ala Leu Val Thr Ile Pro Glu Thr Thr Phe Gln Thr Val Ser Trp						
		305		310		315
His Phe Cys Ile Ala Leu Gly Tyr Thr Asn Ser Cys Leu Asn Pro Val						
		325		330		335
Leu Tyr Ala Phe Leu Asp Glu Asn Phe Lys Arg Cys Phe Arg Glu Phe						
		340		345		350
Cys Ile Pro Thr Ser Ser Asn Ile Glu Gln Gln Asn Ser Thr Arg Ile						
		355		360		365
Arg Gln Asn Thr Arg Asp His Pro Ser Thr Ala Asn Thr Val Asp Arg						
		370		375		380
Thr Asn His Gln Leu Glu Asn Leu Glu Ala Glu Thr Ala Pro Leu Pro						
		385		390		395
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<210> 546
 <211> 1182
 <212> DNA
 <213> Homo sapiens
 <400> 546

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gagcaacaaa actccactcg aattcgtcag aacactagag accaccctc cacggccaat 1140
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<210> 547
<211> 392
<212> PRT
<213> Homo sapiens

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<400> 547
Met Asp Ser Ser Ala Ala Pro Thr Asn Ala Ser Asn Cys Thr Asp Ala
  1              5              10              15

Leu Ala Tyr Ser Ser Cys Ser Pro Ala Pro Ser Pro Gly Ser Trp Val
      20              25              30

Asn Leu Ser His Leu Asp Gly Asn Leu Ser Asp Pro Cys Gly Pro Asn
      35              40              45

Arg Thr Asn Leu Gly Gly Arg Asp Ser Leu Cys Pro Pro Thr Gly Ser
      50              55              60

Pro Ser Met Ile Thr Ala Ile Thr Ile Met Ala Leu Tyr Ser Ile Val
      65              70              75              80

Cys Val Val Gly Leu Phe Gly Asn Phe Leu Val Met Tyr Val Ile Val
      85              90              95

Arg Tyr Thr Lys Met Lys Thr Ala Thr Asn Ile Tyr Ile Phe Asn Leu
      100             105             110

Ala Leu Ala Asp Ala Leu Ala Thr Ser Thr Leu Pro Phe Gln Ser Val
      115             120             125

Asn Tyr Leu Met Gly Thr Trp Pro Phe Gly Thr Ile Leu Cys Lys Ile
      130             135             140

Val Ile Ser Ile Asp Tyr Tyr Asn Met Phe Thr Ser Ile Phe Thr Leu
      145             150             155             160

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Cys Thr Met Ser Val Asp Arg Tyr Ile Ala Val Cys His Pro Val Lys
 165 170 175
 Ala Leu Asp Phe Arg Thr Pro Arg Asn Ala Lys Ile Ile Asn Val Cys
 180 185 190
 Asn Trp Ile Leu Ser Ser Ala Ile Gly Leu Pro Val Met Phe Met Ala
 195 200 205
 Thr Thr Lys Tyr Arg Gln Gly Ser Ile Asp Cys Thr Leu Thr Phe Ser
 210 215 220
 His Pro Thr Trp Tyr Trp Glu Asn Leu Val Lys Ile Cys Val Phe Ile
 225 230 235 240
 Phe Ala Phe Ile Met Pro Val Leu Ile Ile Thr Val Cys Tyr Gly Leu
 245 250 255
 Met Ile Leu Arg Leu Lys Ser Val Arg Met Leu Ser Gly Ser Lys Glu
 260 265 270
 Lys Asp Arg Asn Leu Arg Arg Ile Lys Arg Met Val Leu Val Val Val
 275 280 285
 Ala Val Phe Ile Val Cys Trp Thr Pro Ile His Ile Tyr Val Ile Ile
 290 295 300
 Lys Ala Leu Val Thr Ile Pro Glu Thr Thr Phe Gln Thr Val Ser Trp
 305 310 315 320
 His Phe Cys Ile Ala Leu Gly Tyr Thr Asn Ser Cys Leu Asn Pro Val
 325 330 335
 Leu Tyr Ala Phe Leu Asp Glu Asn Phe Lys Arg Cys Phe Arg Glu Phe
 340 345 350
 Cys Ile Pro Thr Ser Ser Asn Ile Glu Gln Gln Asn Ser Thr Arg Ile
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 Arg Gln Asn Thr Arg Asp His Pro Ser Thr Ala Asn Thr Val Asp Arg
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 Thr Asn His Gln Val Arg Ser Leu
 385 390

<210> 548
 <211> 1278
 <212> DNA
 <213> Homo sapiens

<400> 548
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<210> 549

<211> 425

<212> PRT

<213> Homo sapiens

<400> 549

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Arg Tyr Leu Trp Arg Asp Tyr Leu Tyr Pro Lys Gln Tyr Glu Trp Val
 35 40 45

Leu Ile Ala Ala Tyr Val Ala Val Phe Val Val Ala Leu Val Gly Asn
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Thr Leu Val Cys Leu Ala Val Trp Arg Asn His His Met Arg Thr Val
 65 70 75 80

Thr Asn Tyr Phe Ile Val Asn Leu Ser Leu Ala Asp Val Leu Val Thr
 85 90 95

Ala Ile Cys Leu Pro Ala Ser Leu Leu Val Asp Ile Thr Glu Ser Trp
 100 105 110

Leu Phe Gly His Ala Leu Cys Lys Val Ile Pro Tyr Leu Gln Ala Val
 115 120 125

Ser Val Ser Val Ala Val Leu Thr Leu Ser Phe Ile Ala Leu Asp Arg
 130 135 140

Trp Tyr Ala Ile Cys His Pro Leu Leu Phe Lys Ser Thr Ala Arg Arg
 145 150 155 160

Ala Arg Gly Ser Ile Leu Gly Ile Trp Ala Val Ser Leu Ala Ile Met

165					170					175					
Val	Pro	Gln	Ala	Ala	Val	Met	Glu	Cys	Ser	Ser	Val	Leu	Pro	Glu	Leu
			180					185					190		
Ala	Asn	Arg	Thr	Arg	Leu	Phe	Ser	Val	Cys	Asp	Glu	Arg	Trp	Ala	Asp
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Asp	Leu	Tyr	Pro	Lys	Ile	Tyr	His	Ser	Cys	Phe	Phe	Ile	Val	Thr	Tyr
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Lys	Leu	Trp	Gly	Arg	Gln	Ile	Pro	Gly	Thr	Thr	Ser	Ala	Leu	Val	Arg
				245					250					255	
Asn	Trp	Lys	Arg	Pro	Ser	Asp	Gln	Leu	Gly	Asp	Leu	Glu	Gln	Gly	Leu
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Ser	Gly	Glu	Pro	Gln	Pro	Arg	Gly	Arg	Ala	Phe	Leu	Ala	Glu	Val	Lys
			275				280					285			
Gln	Met	Arg	Ala	Arg	Arg	Lys	Thr	Lys	Lys	Met	Leu	Met	Val	Val	Leu
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Leu	Val	Phe	Ala	Leu	Cys	Tyr	Leu	Pro	Ile	Ser	Val	Leu	Asn	Val	Leu
	305					310					315				320
Lys	Arg	Val	Phe	Gly	Met	Phe	Arg	Gln	Ala	Ser	Asp	Arg	Glu	Ala	Val
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Tyr	Ala	Cys	Phe	Thr	Phe	Ser	His	Trp	Leu	Val	Tyr	Ala	Asn	Ser	Ala
			340					345					350		
Ala	Asn	Pro	Ile	Ile	Tyr	Asn	Phe	Leu	Ser	Gly	Lys	Phe	Arg	Glu	Gln
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Phe	Lys	Ala	Ala	Phe	Ser	Cys	Cys	Leu	Pro	Gly	Leu	Gly	Pro	Cys	Gly
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Ser	Leu	Lys	Ala	Pro	Ser	Pro	Arg	Ser	Ser	Ala	Ser	His	Lys	Ser	Leu
	385					390					395				400
Ser	Leu	Gln	Ser	Arg	Cys	Ser	Ile	Ser	Lys	Ile	Ser	Glu	His	Val	Val
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Leu	Thr	Ser	Val	Thr	Thr	Val	Leu	Pro							
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<210> 550
 <211> 1335
 <212> DNA
 <213> Homo sapiens
 <400> 550

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<210> 551
 <211> 444
 <212> PRT
 <213> Homo sapiens

<400> 551
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 Asp Tyr Asp Asp Glu Glu Phe Leu Arg Tyr Leu Trp Arg Glu Tyr Leu
 35 40 45
 His Pro Lys Glu Tyr Glu Trp Val Leu Ile Ala Gly Tyr Ile Ile Val
 50 55 60
 Phe Val Val Ala Leu Ile Gly Asn Val Leu Val Cys Val Ala Val Trp
 65 70 75 80
 Lys Asn His His Met Arg Thr Val Thr Asn Tyr Phe Ile Val Asn Leu
 85 90 95
 Ser Leu Ala Asp Val Leu Val Thr Ile Thr Cys Leu Pro Ala Thr Leu
 100 105 110
 Val Val Asp Ile Thr Glu Thr Trp Phe Phe Gly Gln Ser Leu Cys Lys
 115 120 125
 Val Ile Pro Tyr Leu Gln Thr Val Ser Val Ser Val Ser Val Leu Thr
 130 135 140

Leu	Ser	Cys	Ile	Ala	Leu	Asp	Arg	Trp	Tyr	Ala	Ile	Cys	His	Pro	Leu	145	150	155	160
Met	Phe	Lys	Ser	Thr	Ala	Lys	Arg	Ala	Arg	Asn	Ser	Ile	Val	Ile	Ile	165	170	175	
Trp	Ile	Val	Ser	Cys	Ile	Ile	Met	Ile	Pro	Gln	Ala	Ile	Val	Met	Glu	180	185	190	
Cys	Ser	Thr	Val	Phe	Pro	Gly	Leu	Ala	Asn	Lys	Thr	Thr	Leu	Phe	Thr	195	200	205	
Val	Cys	Asp	Glu	Arg	Trp	Gly	Gly	Glu	Ile	Tyr	Pro	Lys	Met	Tyr	His	210	215	220	
Ile	Cys	Phe	Phe	Leu	Val	Thr	Tyr	Met	Ala	Pro	Leu	Cys	Leu	Met	Val	225	230	235	240
Leu	Ala	Tyr	Leu	Gln	Ile	Phe	Arg	Lys	Leu	Trp	Cys	Arg	Gln	Ile	Pro	245	250	255	
Gly	Thr	Ser	Ser	Val	Val	Gln	Arg	Lys	Trp	Lys	Pro	Leu	Gln	Pro	Val	260	265	270	
Ser	Gln	Pro	Arg	Gly	Pro	Gly	Gln	Pro	Thr	Lys	Ser	Arg	Met	Ser	Ala	275	280	285	
Val	Ala	Ala	Glu	Ile	Lys	Gln	Ile	Arg	Ala	Arg	Arg	Lys	Thr	Lys	Arg	290	295	300	
Met	Leu	Met	Val	Val	Leu	Leu	Val	Phe	Ala	Ile	Cys	Tyr	Leu	Pro	Ile	305	310	315	320
Ser	Ile	Leu	Asn	Val	Leu	Lys	Arg	Val	Phe	Gly	Met	Phe	Ala	His	Thr	325	330	335	
Glu	Asp	Arg	Glu	Thr	Val	Tyr	Ala	Trp	Phe	Thr	Phe	Ser	His	Trp	Leu	340	345	350	
Val	Tyr	Ala	Asn	Ser	Ala	Ala	Asn	Pro	Ile	Ile	Tyr	Asn	Phe	Leu	Ser	355	360	365	
Gly	Lys	Phe	Arg	Glu	Glu	Phe	Lys	Ala	Ala	Phe	Ser	Cys	Cys	Cys	Leu	370	375	380	
Gly	Val	His	His	Arg	Gln	Glu	Asp	Arg	Leu	Thr	Arg	Gly	Arg	Thr	Ser	385	390	395	400
Thr	Glu	Ser	Arg	Lys	Ser	Leu	Thr	Thr	Gln	Ile	Ser	Asn	Phe	Asp	Asn	405	410	415	
Ile	Ser	Lys	Leu	Ser	Glu	Gln	Val	Val	Leu	Thr	Ser	Ile	Ser	Thr	Leu	420	425	430	
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<210> 552
 <211> 1407
 <212> DNA
 <213> Homo sapiens

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<210> 553
 <211> 468
 <212> PRT
 <213> Homo sapiens

<400> 553
 Met Ala Gly Val Val His Val Ser Leu Ala Ala Leu Leu Leu Leu Pro
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 Met Ala Pro Ala Met His Ser Asp Cys Ile Phe Lys Lys Glu Gln Ala
 20 25 30
 Met Cys Leu Glu Lys Ile Gln Arg Ala Asn Glu Leu Met Gly Phe Asn
 35 40 45
 Asp Ser Ser Pro Gly Cys Pro Gly Met Trp Asp Asn Ile Thr Cys Trp
 50 55 60
 Lys Pro Ala His Val Gly Glu Met Val Leu Val Ser Cys Pro Glu Leu
 65 70 75 80
 Phe Arg Ile Phe Asn Pro Asp Gln Val Trp Glu Thr Glu Thr Ile Gly
 85 90 95

[illegible]

Cys Phe Leu Asn Gly Glu Val Gln Ala Glu Ile Lys Arg Lys Trp Arg
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Ser Trp Lys Val Asn Arg Tyr Phe Ala Val Asp Phe Lys His Arg His
420 425 430

Pro Ser Leu Ala Ser Ser Gly Val Asn Gly Gly Thr Gln Leu Ser Ile
435 440 445

Leu Ser Lys Ser Ser Ser Gln Ile Arg Met Ser Gly Leu Pro Ala Asp
450 455 460

Asn Leu Ala Thr
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<210> 554
<211> 1029
<212> DNA
<213> Homo sapiens

<400> 554
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<210> 555
<211> 342
<212> PRT
<213> Homo sapiens

<400> 555
Met Glu Pro His Asp Ser Ser His Met Asp Ser Glu Phe Arg Tyr Thr
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Leu Phe Pro Ile Val Tyr Ser Ile Ile Phe Val Leu Gly Val Ile Ala
20 25 30

Asn Gly Tyr Val Leu Trp Val Phe Ala Arg Leu Tyr Pro Cys Lys Lys
35 40 45

Phe	Asn	Glu	Ile	Lys	Ile	Phe	Met	Val	Asn	Leu	Thr	Met	Ala	Asp	Met	50	55	60
Leu	Phe	Leu	Ile	Thr	Leu	Pro	Leu	Trp	Ile	Val	Tyr	Tyr	Gln	Asn	Gln	65	70	75
Gly	Asn	Trp	Ile	Leu	Pro	Lys	Phe	Leu	Cys	Asn	Val	Ala	Gly	Cys	Leu	85	90	95
Phe	Phe	Ile	Asn	Thr	Tyr	Cys	Ser	Val	Ala	Phe	Leu	Gly	Val	Ile	Thr	100	105	110
Tyr	Asn	Arg	Phe	Gln	Ala	Val	Thr	Arg	Pro	Ile	Lys	Thr	Ala	Gln	Ala	115	120	125
Asn	Thr	Arg	Lys	Arg	Gly	Ile	Ser	Leu	Ser	Leu	Val	Ile	Trp	Val	Ala	130	135	140
Ile	Val	Gly	Ala	Ala	Ser	Tyr	Phe	Leu	Ile	Leu	Asp	Ser	Thr	Asn	Thr	145	150	155
Val	Pro	Asp	Ser	Ala	Gly	Ser	Gly	Asn	Val	Thr	Arg	Cys	Phe	Glu	His	165	170	175
Tyr	Glu	Lys	Gly	Ser	Val	Pro	Val	Leu	Ile	Ile	His	Ile	Phe	Ile	Val	180	185	190
Phe	Ser	Phe	Phe	Leu	Val	Phe	Leu	Ile	Ile	Leu	Phe	Cys	Asn	Leu	Val	195	200	205
Ile	Ile	Arg	Thr	Leu	Leu	Met	Gln	Pro	Val	Gln	Gln	Gln	Arg	Asn	Ala	210	215	220
Glu	Val	Lys	Arg	Arg	Ala	Lys	Trp	Met	Val	Cys	Thr	Val	Leu	Ala	Val	225	230	235
Phe	Ile	Ile	Cys	Phe	Val	Pro	His	His	Val	Val	Gln	Leu	Pro	Trp	Thr	245	250	255
Leu	Ala	Glu	Leu	Gly	Phe	Gln	Asp	Ser	Lys	Phe	His	Gln	Ala	Ile	Asn	260	265	270
Asp	Ala	His	Gln	Val	Thr	Leu	Cys	Leu	Leu	Ser	Thr	Asn	Cys	Val	Leu	275	280	285
Asp	Pro	Val	Ile	Tyr	Cys	Phe	Leu	Thr	Lys	Lys	Phe	Arg	Lys	His	Leu	290	295	300
Thr	Glu	Lys	Phe	Tyr	Ser	Met	Arg	Ser	Ser	Arg	Lys	Cys	Ser	Arg	Ala	305	310	315
Thr	Thr	Asp	Thr	Val	Thr	Glu	Val	Val	Val	Pro	Phe	Asn	Gln	Ile	Pro	325	330	335
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<210> 556
 <211> 1209
 <212> DNA
 <213> Homo sapiens

<400> 556
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<210> 557
 <211> 402
 <212> PRT
 <213> Homo sapiens

<400> 557
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 Gly Ala Ser Pro Ala Leu Pro Ile Phe Ser Met Thr Leu Gly Ala Val
 35 40 45
 Ser Asn Leu Leu Ala Leu Ala Leu Leu Ala Gln Ala Ala Gly Arg Leu
 50 55 60
 Arg Arg Arg Arg Ser Ala Thr Thr Phe Leu Leu Phe Val Ala Ser Leu
 65 70 75 80
 Leu Ala Thr Asp Leu Ala Gly His Val Ile Pro Gly Ala Leu Val Leu
 85 90 95
 Arg Leu Tyr Thr Ala Gly Arg Ala Pro Ala Gly Gly Ala Cys His Phe
 100 105 110

Leu	Gly	Gly	Cys	Met	Val	Phe	Phe	Gly	Leu	Cys	Pro	Leu	Leu	Leu	Gly
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Cys	Gly	Met	Ala	Val	Glu	Arg	Cys	Val	Gly	Val	Thr	Arg	Pro	Leu	Leu
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His	Ala	Ala	Arg	Val	Ser	Val	Ala	Arg	Ala	Arg	Leu	Ala	Leu	Ala	Ala
145					150					155					160
Val	Ala	Ala	Val	Ala	Leu	Ala	Val	Ala	Leu	Leu	Pro	Leu	Ala	Arg	Val
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Gly	Arg	Tyr	Glu	Leu	Gln	Tyr	Pro	Gly	Thr	Trp	Cys	Phe	Ile	Gly	Leu
			180					185					190		
Gly	Pro	Pro	Gly	Gly	Trp	Arg	Gln	Ala	Leu	Leu	Ala	Gly	Leu	Phe	Ala
		195					200					205			
Ser	Leu	Gly	Leu	Val	Ala	Leu	Leu	Ala	Ala	Leu	Val	Cys	Asn	Thr	Leu
	210					215					220				
Ser	Gly	Leu	Ala	Leu	His	Arg	Ala	Arg	Trp	Arg	Arg	Arg	Ser	Arg	Arg
225					230					235					240
Pro	Pro	Pro	Ala	Ser	Gly	Pro	Asp	Ser	Arg	Arg	Arg	Trp	Gly	Ala	His
				245					250					255	
Gly	Pro	Arg	Ser	Ala	Ser	Ala	Ser	Ser	Ala	Ser	Ser	Ile	Ala	Ser	Ala
			260					265					270		
Ser	Thr	Phe	Phe	Gly	Gly	Ser	Arg	Ser	Ser	Gly	Ser	Ala	Arg	Arg	Ala
		275					280					285			
Arg	Ala	His	Asp	Val	Glu	Met	Lys	Gly	Gln	Leu	Val	Gly	Ile	Met	Val
	290					295					300				
Val	Ser	Cys	Ile	Cys	Trp	Ser	Pro	Met	Leu	Val	Leu	Val	Ala	Leu	Ala
305					310					315					320
Val	Gly	Gly	Trp	Ser	Ser	Thr	Ser	Leu	Gln	Arg	Pro	Leu	Phe	Leu	Ala
				325					330					335	
Val	Arg	Leu	Ala	Ser	Trp	Asn	Gln	Ile	Leu	Asp	Pro	Trp	Val	Tyr	Ile
			340				345						350		
Leu	Leu	Arg	Gln	Ala	Val	Leu	Arg	Gln	Leu	Leu	Arg	Leu	Leu	Pro	Pro
		355					360					365			
Arg	Ala	Gly	Ala	Lys	Gly	Gly	Pro	Ala	Gly	Leu	Gly	Leu	Thr	Pro	Ser
	370					375					380				
Ala	Trp	Glu	Ala	Ser	Ser	Leu	Arg	Ser	Ser	Arg	His	Ser	Gly	Leu	Ser
385					390					395					400
His	Phe														

<210> 558
 <211> 1077
 <212> DNA
 <213> Homo sapiens

<400> 558
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 atagcactgg cgctgctggc gcgcgcgtgg cggggggagc tgggggtgcag cgccggccgc 180
 aggagctccc tctccttgtt ccacgtgctg gtgaccgagc tgggtgttcac cgacctgtct 240
 gggacctgcc tcatcagccc agtgggtactg gcttcgtacg cgcggaacca gacctgtgtg 300
 gcaactggcg ccgagagccg cgcgtgcacc tacttcgctt tcgccatgac cttcttcagc 360
 ctggccacga tgctcatgct cttcgccatg gccctggagc gctacctctc gatcgggcac 420
 ccctacttct accagcgccg cgtctcggcc tccgggggccc tggccgtgct gcctgtcatc 480
 tatgcagtct ccctgctctt ctgctcgtcg ccgctgctgg actatgggca gtacgtccag 540
 tactgccccg ggacctggtg cttcatccgg cacgggcgga ccgcttacct gcagctgtac 600
 gccaccctgc tgctgcttct cattgtctcg gtgctcgctt gcaacttcag tgtcattctc 660
 aacctcatcc gcatgcaccg ccgaagccgg agaagccgct gcggaccttc cctgggcagt 720
 ggccggggcg gccccggggc ccgcaggaga ggggaaaggg tgtccatggc ggaggagacg 780
 gaccacaaga ttctcctggc tatcatgacc atcaccttcg ccgtctgtct cttgcctttc 840
 acgatttttg catatatgaa tgaaacctct tcccgaagg aaaaatggga cctccaagct 900
 cttaggtttt tatcaattaa ttcaataatt gaccttggg tctttgccat ccttaggcct 960
 cctgttctga gactaatgcg ttcagtcctc tgttgtcgga ttccattaag aacacaagat 1020
 gcaacacaaa cttcctgttc tacacagtca gatgccagta aacaggctga cctttga 1077

<210> 559
 <211> 358
 <212> PRT
 <213> Homo sapiens

<400> 559
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 Gln Trp Leu Pro Pro Gly Glu Ser Pro Ala Ile Ser Ser Val Met Phe
 20 25 30
 Ser Ala Gly Val Leu Gly Asn Leu Ile Ala Leu Ala Leu Leu Ala Arg
 35 40 45
 Arg Trp Arg Gly Asp Val Gly Cys Ser Ala Gly Arg Arg Ser Ser Leu
 50 55 60
 Ser Leu Phe His Val Leu Val Thr Glu Leu Val Phe Thr Asp Leu Leu
 65 70 75 80
 Gly Thr Cys Leu Ile Ser Pro Val Val Leu Ala Ser Tyr Ala Arg Asn
 85 90 95
 Gln Thr Leu Val Ala Leu Ala Pro Glu Ser Arg Ala Cys Thr Tyr Phe
 100 105 110
 Ala Phe Ala Met Thr Phe Phe Ser Leu Ala Thr Met Leu Met Leu Phe
 115 120 125

Ala Met Ala Leu Glu Arg Tyr Leu Ser Ile Gly His Pro Tyr Phe Tyr
130 135 140

Gln Arg Arg Val Ser Ala Ser Gly Gly Leu Ala Val Leu Pro Val Ile
145 150 155 160

Tyr Ala Val Ser Leu Leu Phe Cys Ser Leu Pro Leu Leu Asp Tyr Gly
165 170 175

Gln Tyr Val Gln Tyr Cys Pro Gly Thr Trp Cys Phe Ile Arg His Gly
180 185 190

Arg Thr Ala Tyr Leu Gln Leu Tyr Ala Thr Leu Leu Leu Leu Ile
195 200 205

Val Ser Val Leu Ala Cys Asn Phe Ser Val Ile Leu Asn Leu Ile Arg
210 215 220

Met His Arg Arg Ser Arg Arg Ser Arg Cys Gly Pro Ser Leu Gly Ser
225 230 235 240

Gly Arg Gly Gly Pro Gly Ala Arg Arg Arg Gly Glu Arg Val Ser Met
245 250 255

Ala Glu Glu Thr Asp His Lys Ile Leu Leu Ala Ile Met Thr Ile Thr
260 265 270

Phe Ala Val Cys Ser Leu Pro Phe Thr Ile Phe Ala Tyr Met Asn Glu
275 280 285

Thr Ser Ser Arg Lys Glu Lys Trp Asp Leu Gln Ala Leu Arg Phe Leu
290 295 300

Ser Ile Asn Ser Ile Ile Asp Pro Trp Val Phe Ala Ile Leu Arg Pro
305 310 315 320

Pro Val Leu Arg Leu Met Arg Ser Val Leu Cys Cys Arg Ile Ser Leu
325 330 335

Arg Thr Gln Asp Ala Thr Gln Thr Ser Cys Ser Thr Gln Ser Asp Ala
340 345 350

Ser Lys Gln Ala Asp Leu
355

<210> 560
<211> 1467
<212> DNA
<213> Homo sapiens

<400> 560
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gtgctgtgca agtcgcgcaa ggagcagaag gagacgacct tctacacgct ggtatgtggg 180
ctggctgtca ccgacctgtt gggcactttg ttggtgagcc cggtgaccat cgccacgtac 240

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atcaaccatg cctattttcta cagccactac gtggacaagc gattggcggg cctcacgctc 420
tttgagctct atgcgtccaa cgtgctcttt tgcgcgctgc ccaacatggg tctcggtagc 480
tcgcggctgc agtaccacga cactgggtgc ttcacgcact ggaccaccaa cgtgacggcg 540
cacgccgcct actcctacat gtacgcgggc ttcagctcct tcctcattct cgccaccgtc 600
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<210> 561
<211> 488
<212> PRT
<213> Homo sapiens

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<400> 561
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          20                      25                      30

Val Gly Asn Leu Val Ala Ile Val Val Leu Cys Lys Ser Arg Lys Glu
          35                      40                      45

Gln Lys Glu Thr Thr Phe Tyr Thr Leu Val Cys Gly Leu Ala Val Thr
          50                      55                      60

Asp Leu Leu Gly Thr Leu Leu Val Ser Pro Val Thr Ile Ala Thr Tyr
          65                      70                      75                      80

Met Lys Gly Gln Trp Pro Gly Gly Gln Pro Leu Cys Glu Tyr Ser Thr
          85                      90                      95

Phe Ile Leu Leu Phe Phe Ser Leu Ser Gly Leu Ser Ile Ile Cys Ala
          100                      105                      110

Met Ser Val Glu Arg Tyr Leu Ala Ile Asn His Ala Tyr Phe Tyr Ser
          115                      120                      125

His Tyr Val Asp Lys Arg Leu Ala Gly Leu Thr Leu Phe Ala Val Tyr
          130                      135                      140

Ala Ser Asn Val Leu Phe Cys Ala Leu Pro Asn Met Gly Leu Gly Ser

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[illegible]

450

455

460

Pro Ala Pro Lys Gly Ser Ser Leu Gln Val Thr Phe Pro Ser Glu Thr
 465 470 475 480

Leu Asn Leu Ser Glu Lys Cys Ile
 485

<210> 562
 <211> 1782
 <212> DNA
 <213> Homo sapiens

<400> 562
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 ctgcaccgtg ctcaggccca gtgcgaaaaa cggctcaagg aggtcctgca gaggccagcc 180
 agcataatgg aatcagacaa gggatggaca tctgcgtcca catcaggga gcccaggaaa 240
 gataaggcat ctgggaagct ctaccctgag tctgaggagg acaaggaggc acccactggc 300
 agcaggatcc gagggcgccc ctgtctgccc gaatgggacc acatcctgtg ctggccgctg 360
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 gacgctgtgc tctactctgg cgccacgctt gatgaggctg agcgctcac cgaggaggag 780
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 gatgggttcc tcaacggctc ctgctcaggc ctggacgagg aggcctctgg gcctgagcgg 1740
 ccacctgccc tgctacagga agagtgggag acagtcatgt ga 1782

<210> 563
 <211> 593
 <212> PRT
 <213> Homo sapiens

<400> 563
 Met Gly Thr Ala Arg Ile Ala Pro Gly Leu Ala Leu Leu Leu Cys Cys
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Pro Val Leu Ser Ser Ala Tyr Ala Leu Val Asp Ala Asp Asp Val Met

SECRET

0-9 A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

<210>	564
<211>	1653
<212>	DNA

<213> Homo sapiens

<400> 564

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gtgctgaaag cgaaagtaca atgtgaactc aacatcacag ctcaactcca ggagggagaa 180
ggtaattggt tccctgaatg ggatggactc atttgttggc ccagaggaac agtggggaaa 240
atatcggttg ttccatgccc tccttatatt tatgacttca accataaagg agttgctttc 300
cgacactgta accccaatgg aacatgggat tttatgcaca gcttaaataa aacatggggc 360
aattattcag actgccttcg ctttctgcag ccagatatca gcataggaaa gcaagaattc 420
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atgcacttat ttgtgtcttt catgctgaga gctacaagca tctttgtcaa agacagagta 600
gtccatgctc acataggagt aaaggagctg gagtccctaa taatgcagga tgaccacaaa 660
aattccattg aggcaacttc tgtggacaaa tcacaatata tcgggtgcaa gattgctgtt 720
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gagcaggact gcctgccaca ctctttccac gaggagacca aggaagatag tgggaggcag 1560
ggagatgata ttctaattga gaagccttcc aggcctatgg aatctaacc agacactgaa 1620
ggatgccaa gagaactga ggatgttctc tga 1653
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<210> 565

<211> 550

<212> PRT

<213> Homo sapiens

<400> 565

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Gly Ser Cys Leu Leu Ala Arg Ala Gln Leu Asp Ser Asp Gly Thr Ile
  20             25             30

Thr Ile Glu Glu Gln Ile Val Leu Val Leu Lys Ala Lys Val Gln Cys
  35             40             45

Glu Leu Asn Ile Thr Ala Gln Leu Gln Glu Gly Glu Gly Asn Cys Phe
  50             55             60

Pro Glu Trp Asp Gly Leu Ile Cys Trp Pro Arg Gly Thr Val Gly Lys
  65             70             75             80

Ile Ser Ala Val Pro Cys Pro Pro Tyr Ile Tyr Asp Phe Asn His Lys
  85             90             95
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Gly	Val	Ala	Phe	Arg	His	Cys	Asn	Pro	Asn	Gly	Thr	Trp	Asp	Phe	Met		
			100						105					110			
His	Ser	Leu	Asn	Lys	Thr	Trp	Ala	Asn	Tyr	Ser	Asp	Cys	Leu	Arg	Phe		
		115					120					125					
Leu	Gln	Pro	Asp	Ile	Ser	Ile	Gly	Lys	Gln	Glu	Phe	Phe	Glu	Arg	Leu		
	130					135					140						
Tyr	Val	Met	Tyr	Thr	Val	Gly	Tyr	Ser	Ile	Ser	Phe	Gly	Ser	Leu	Ala		
145					150					155					160		
Val	Ala	Ile	Leu	Ile	Ile	Gly	Tyr	Phe	Arg	Arg	Leu	His	Cys	Thr	Arg		
				165					170					175			
Asn	Tyr	Ile	His	Met	His	Leu	Phe	Val	Ser	Phe	Met	Leu	Arg	Ala	Thr		
			180					185					190				
Ser	Ile	Phe	Val	Lys	Asp	Arg	Val	Val	His	Ala	His	Ile	Gly	Val	Lys		
	195						200					205					
Glu	Leu	Glu	Ser	Leu	Ile	Met	Gln	Asp	Asp	Pro	Gln	Asn	Ser	Ile	Glu		
	210					215					220						
Ala	Thr	Ser	Val	Asp	Lys	Ser	Gln	Tyr	Ile	Gly	Cys	Lys	Ile	Ala	Val		
225					230					235					240		
Val	Met	Phe	Ile	Tyr	Phe	Leu	Ala	Thr	Asn	Tyr	Tyr	Trp	Ile	Leu	Val		
				245					250					255			
Glu	Gly	Leu	Tyr	Leu	His	Asn	Leu	Ile	Phe	Val	Ala	Phe	Phe	Ser	Asp		
			260					265					270				
Thr	Lys	Tyr	Leu	Trp	Gly	Phe	Ile	Leu	Ile	Gly	Trp	Gly	Phe	Pro	Ala		
		275					280					285					
Ala	Phe	Val	Ala	Ala	Trp	Ala	Val	Ala	Arg	Ala	Thr	Leu	Ala	Asp	Ala		
	290					295					300						
Arg	Cys	Trp	Glu	Leu	Ser	Ala	Gly	Asp	Ile	Lys	Trp	Ile	Tyr	Gln	Ala		
305					310					315					320		
Pro	Ile	Leu	Ala	Ala	Ile	Gly	Leu	Asn	Phe	Ile	Leu	Phe	Leu	Asn	Thr		
				325					330					335			
Val	Arg	Val	Leu	Ala	Thr	Lys	Ile	Trp	Glu	Thr	Asn	Ala	Val	Gly	His		
			340					345					350				
Asp	Thr	Arg	Lys	Gln	Tyr	Arg	Lys	Leu	Ala	Lys	Ser	Pro	Leu	Val	Leu		
		355					360					365					
Val	Leu	Val	Phe	Gly	Val	His	Tyr	Ile	Val	Phe	Val	Cys	Leu	Pro	His		
	370					375					380						
Ser	Phe	Thr	Gly	Leu	Gly	Trp	Glu	Ile	Arg	Met	His	Cys	Glu	Leu	Phe		
385					390					395					400		

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 Asn Gly Glu Val Gln Ala Glu Val Lys Lys Met Trp Ser Arg Trp Asn
 420 425 430
 Leu Ser Val Asp Trp Lys Arg Thr Pro Pro Cys Gly Ser Arg Arg Cys
 435 440 445
 Gly Ser Val Leu Thr Thr Val Thr His Ser Thr Ser Ser Gln Ser Gln
 450 455 460
 Val Ala Ala Ser Thr Arg Met Val Leu Ile Ser Gly Lys Ala Ala Lys
 465 470 475 480
 Ile Ala Ser Arg Gln Pro Asp Ser His Ile Thr Leu Pro Gly Tyr Val
 485 490 495
 Trp Ser Asn Ser Glu Gln Asp Cys Leu Pro His Ser Phe His Glu Glu
 500 505 510
 Thr Lys Glu Asp Ser Gly Arg Gln Gly Asp Asp Ile Leu Met Glu Lys
 515 520 525
 Pro Ser Arg Pro Met Glu Ser Asn Pro Asp Thr Glu Gly Cys Gln Gly
 530 535 540
 Glu Thr Glu Asp Val Leu
 545 550

<210> 566
 <211> 1323
 <212> DNA
 <213> Homo sapiens

<400> 566
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 cagccagtgc cagggttgta ggggatgtgg gacaacataa gctgctggcc ctcttctgtg 240
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aagaagtggc agcaatggca cctccgtgag ttcccactgc accccgtggc ctccttcagc 1260
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tga 1323

<210> 567
<211> 440
<212> PRT
<213> Homo sapiens

<400> 567
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35 40 45
Leu Ser Arg Glu Gln Thr Gly Asp Leu Gly Thr Glu Gln Pro Val Pro
50 55 60
Gly Cys Glu Gly Met Trp Asp Asn Ile Ser Cys Trp Pro Ser Ser Val
65 70 75 80
Pro Gly Arg Met Val Glu Val Glu Cys Pro Arg Phe Leu Arg Met Leu
85 90 95
Thr Ser Arg Asn Gly Ser Leu Phe Arg Asn Cys Thr Gln Asp Gly Trp
100 105 110
Ser Glu Thr Phe Pro Arg Pro Asn Leu Ala Cys Gly Val Asn Val Asn
115 120 125
Asp Ser Ser Asn Glu Lys Arg His Ser Tyr Leu Leu Lys Leu Lys Val
130 135 140
Met Tyr Thr Val Gly Tyr Ser Ser Ser Leu Val Met Leu Leu Val Ala
145 150 155 160
Leu Gly Ile Leu Cys Ala Phe Arg Arg Leu His Cys Thr Arg Asn Tyr
165 170 175
Ile His Met His Leu Phe Val Ser Phe Ile Leu Arg Ala Leu Ser Asn
180 185 190
Phe Ile Lys Asp Ala Val Leu Phe Ser Ser Asp Asp Val Thr Tyr Cys
195 200 205
Asp Pro His Arg Ala Gly Cys Lys Leu Val Met Val Leu Phe Gln Tyr
210 215 220
Cys Ile Met Ala Asn Tyr Ser Trp Leu Leu Val Glu Gly Leu Tyr Leu
225 230 235 240
His Thr Leu Leu Ala Ile Ser Phe Phe Ser Glu Arg Lys Tyr Leu Gln

	245		250		255
Gly Phe Val	Ala Phe Gly Trp Gly	Ser Pro Ala Ile Phe Val	Ala Leu		
	260	265	270		
Trp Ala Ile	Ala Arg His Phe Leu Glu Asp Val	Gly Cys Trp Asp Ile			
	275	280	285		
Asn Ala Asn	Ala Ser Ile Trp Trp Ile Ile Arg	Gly Pro Val Ile Leu			
	290	295	300		
Ser Ile Leu	Ile Asn Phe Ile Leu Phe Ile Asn	Ile Leu Arg Ile Leu			
305	310	315	320		
Met Arg Lys	Leu Arg Thr Gln Glu Thr Arg Gly	Asn Glu Val Ser His			
	325	330	335		
Tyr Lys Arg	Leu Ala Arg Ser Pro Leu Leu Ile	Pro Leu Phe Gly			
	340	345	350		
Ile His Tyr	Ile Val Phe Ala Phe Ser Pro Glu Asp	Ala Met Glu Ile			
	355	360	365		
Gln Leu Phe	Phe Glu Leu Ala Leu Gly Ser Phe	Gln Gly Leu Val Val			
	370	375	380		
Ala Val Leu	Tyr Cys Phe Leu Asn Gly Glu Val	Gln Leu Glu Val Gln			
385	390	395	400		
Lys Lys Trp	Gln Gln Trp His Leu Arg Glu Phe	Pro Leu His Pro Val			
	405	410	415		
Ala Ser Phe	Ser Asn Ser Thr Lys Ala Ser His	Leu Glu Gln Ser Gln			
	420	425	430		
Gly Thr Cys	Arg Thr Ser Ile Ile				
	435	440			

<210> 568
 <211> 1176
 <212> DNA
 <213> Homo sapiens

<400> 568
 atgttcccca atggcaccgc ctctctctct tctctctctc ctagccccag cccgggcagc 60
 tgcggcgaag gcggcggcag caggggcccc ggggcgggcg ctgcggacgg catggaggag 120
 ccagggcgaa atgcgtccca gaacgggacc ttgagcgagg gccagggcag cgccatcctg 180
 atctctttca tctactcgt ggtgtgcctg gtggggctgt gtgggaactc tatggtcatc 240
 tacgtgatcc tgcgctatgc caagatgaag acggccacca acatctacat cctaaatctg 300
 gccattgctg atgagctgct catgctcagc gtgccttcc tagtcacctc cacgttggtg 360
 cgccactggc ccttcgggtgc gctgctctgc cgctcgtgc tcagcgtgga cgcggtcaac 420
 atgttcacca gcactactg tctgactgtg ctacagctgg accgctacgt ggccgtggtg 480
 catcccatca aggcggcccg ctaccgcgg cccaacgtgg ccaaggtagt aaacctgggc 540
 gtgtgggtgc tatcgctgct cgtcatcctg cccatcgtgg tcttctctcg caccgcggcc 600
 aacagcgacg gcacggtggc ttgcaacatg ctcatgccag agcccgtca acgctggctg 660
 gtgggcttcg tgttgtacac atttctcatg ggcttctgc tgcccgtggg ggctatctgc 720

Leu Tyr Thr Phe Leu Met Gly Phe Leu Leu Pro Val Gly Ala Ile Cys
 225 230 235 240
 Leu Cys Tyr Val Leu Ile Ile Ala Lys Met Arg Met Val Ala Leu Lys
 245 250 255
 Ala Gly Trp Gln Gln Arg Lys Arg Ser Glu Arg Lys Ile Lys Leu Met
 260 265 270
 Val Met Met Val Val Met Val Phe Val Ile Cys Trp Met Pro Phe Tyr
 275 280 285
 Val Val Gln Leu Val Asn Val Phe Ala Glu Gln Asp Asp Ala Thr Val
 290 295 300
 Ser Gln Leu Ser Val Ile Leu Gly Tyr Ala Asn Ser Cys Ala Asn Pro
 305 310 315 320
 Ile Leu Tyr Gly Phe Leu Ser Asp Asn Phe Lys Arg Ser Phe Gln Arg
 325 330 335
 Ile Leu Cys Leu Ser Trp Met Asp Asn Ala Ala Glu Glu Pro Val Asp
 340 345 350
 Tyr Tyr Ala Thr Ala Leu Lys Ser Arg Ala Tyr Ser Val Glu Asp Phe
 355 360 365
 Gln Pro Glu Asn Leu Glu Ser Gly Gly Val Phe Arg Asn Gly Thr Cys
 370 375 380
 Thr Ser Arg Ile Thr Thr Leu
 385 390

<210> 570
 <211> 1110
 <212> DNA
 <213> Homo sapiens

<400> 570
 atggacatgg cggatgagcc actcaatgga agccacacat ggctatccat tccatttgac 60
 ctcaatggct ctgtggtgtc aaccaacacc tcaaaccaga cagagccgta ctatgacctg 120
 acaagcaatg cagtcctcac attcatctat tttgtggtct gcatcattgg gttgtgtggc 180
 aacacacttg tcatttatgt catcctccgc tatgccaaaga tgaagaccat caccaacatt 240
 tacatcctca acctggccat cgcagatgag ctcttcatgc tgggtctgcc tttcttggct 300
 atgcaggtgg ctctggtcca ctggcccttt ggcaaggcca tttgccgggt ggtcatgact 360
 gtggatggca tcaatcagtt caccagcatc ttctgectga cagtcatgag catcgaccga 420
 tacctggctg tggctccacc catcaagtgc gccaaagtga ggagaccccg gacggccaag 480
 atgatcacca tggctgtgtg gggagtctct ctgctggtca tcttgcccat catgatatat 540
 gctgggctcc ggagcaacca gtgggggaga agcagctgca ccatcaactg gccaggtgaa 600
 tctggggctt ggtacacagg gttcatcatc tacactttca ttctgggggt cctggtacct 660
 ctaccatca tctgtctttg ctacctgttc attatcatca aggtgaagtc ctctggaatc 720
 cgagtggtgct cctctaagag gaagaagtct gagaagaagg tcaaacgaat ggtgtccatc 780
 gtggtggctg tcttcatctt ctgctggctt cccttctaca tattcaacgt ttcttccgtc 840
 tccatggcca tcagcccccac cccagccctt aaaggcatgt ttgactttgt ggtggtcctc 900
 acctatgcta acagctgtgc caacctatc ctatatgcct tcttgtctga caacttcaag 960

aagagcttcc agaatgtcct ctgcttggtc aaggtgagcg gcacagatga tggggagcgg 1020
 agtgacagta agcaggacaa atcccggtg aatgagacca cggagaccga gaggaccctc 1080
 ctcaatggag acctccaaac cagtatctga 1110

<210> 571
 <211> 369
 <212> PRT
 <213> Homo sapiens

<400> 571
 Met Asp Met Ala Asp Glu Pro Leu Asn Gly Ser His Thr Trp Leu Ser
 1 5 10 15
 Ile Pro Phe Asp Leu Asn Gly Ser Val Val Ser Thr Asn Thr Ser Asn
 20 25 30
 Gln Thr Glu Pro Tyr Tyr Asp Leu Thr Ser Asn Ala Val Leu Thr Phe
 35 40 45
 Ile Tyr Phe Val Val Cys Ile Ile Gly Leu Cys Gly Asn Thr Leu Val
 50 55 60
 Ile Tyr Val Ile Leu Arg Tyr Ala Lys Met Lys Thr Ile Thr Asn Ile
 65 70 75 80
 Tyr Ile Leu Asn Leu Ala Ile Ala Asp Glu Leu Phe Met Leu Gly Leu
 85 90 95
 Pro Phe Leu Ala Met Gln Val Ala Leu Val His Trp Pro Phe Gly Lys
 100 105 110
 Ala Ile Cys Arg Val Val Met Thr Val Asp Gly Ile Asn Gln Phe Thr
 115 120 125
 Ser Ile Phe Cys Leu Thr Val Met Ser Ile Asp Arg Tyr Leu Ala Val
 130 135 140
 Val His Pro Ile Lys Ser Ala Lys Trp Arg Arg Pro Arg Thr Ala Lys
 145 150 155 160
 Met Ile Thr Met Ala Val Trp Gly Val Ser Leu Leu Val Ile Leu Pro
 165 170 175
 Ile Met Ile Tyr Ala Gly Leu Arg Ser Asn Gln Trp Gly Arg Ser Ser
 180 185 190
 Cys Thr Ile Asn Trp Pro Gly Glu Ser Gly Ala Trp Tyr Thr Gly Phe
 195 200 205
 Ile Ile Tyr Thr Phe Ile Leu Gly Phe Leu Val Pro Leu Thr Ile Ile
 210 215 220
 Cys Leu Cys Tyr Leu Phe Ile Ile Ile Lys Val Lys Ser Ser Gly Ile
 225 230 235 240
 Arg Val Gly Ser Ser Lys Arg Lys Lys Ser Glu Lys Lys Val Lys Arg

405040-60592869

245 250 255

Met Val Ser Ile Val Val Ala Val Phe Ile Phe Cys Trp Leu Pro Phe
260 265 270

Tyr Ile Phe Asn Val Ser Ser Val Ser Met Ala Ile Ser Pro Thr Pro
275 280 285

Ala Leu Lys Gly Met Phe Asp Phe Val Val Val Leu Thr Tyr Ala Asn
290 295 300

Ser Cys Ala Asn Pro Ile Leu Tyr Ala Phe Leu Ser Asp Asn Phe Lys
305 310 315 320

Lys Ser Phe Gln Asn Val Leu Cys Leu Val Lys Val Ser Gly Thr Asp
325 330 335

Asp Gly Glu Arg Ser Asp Ser Lys Gln Asp Lys Ser Arg Leu Asn Glu
340 345 350

Thr Thr Glu Thr Gln Arg Thr Leu Leu Asn Gly Asp Leu Gln Thr Ser
355 360 365

Ile

<210> 572
<211> 1257
<212> DNA
<213> Homo sapiens

<400> 572

atggacatgc ttcattccatc atcgggtgtcc acgacctcag aacctgagaa tgcctcctcg 60
gcctggcccc cagatgccac cctgggcaac gtgtcggcgg gcccaagccc ggcagggctg 120
gccgtcagtg gcgttctgat ccccttggtc tacctgggtg tgtgcgtggt gggcctgctg 180
ggtaactcgc tggatcatc tgtggtcctg cggcacacgg ccagcccttc agtcaccaac 240
gtctacatcc tcaacctggc gctggccgac gagctcttca tgctgggggt gcccttctg 300
gccgccaga acgccctgtc ctactggccc ttcgggtccc tcatgtgccg cctgggtcatg 360
gcggtggatg gcatcaacca gtccaccage atattctgcc tgactgtcat gagegtggac 420
cgctacctgg ccgtggtaca tcccaccgc tcggcccgct ggcgcacagc tccgggtggc 480
cgcacgggtc gcgcggctgt gtgggtggcc tcagccgtgg tgggtgctgcc cgtgggtggc 540
ttctcgggag tgccccgcgg catgagcacc tgccacatgc agtggcccga gccggcggcg 600
gcctggcgag ccgggttcat catctacacg gccgcactgg gcttcttcgg gccgtgctg 660
gtcatctgcc tctgctacct gctcatcgtg gtgaagggtg gctcagctgg gcgccgggtg 720
tgggcaccct cgtgccagcg gcgcggcgcc tccgaacgca ggggtcaagc catggtggtg 780
gccgtggtgg cgtcttctgt gctctgctgg atgcccttct acgtgctcaa catcgtcaac 840
gtggtgtgcc cactgccgga ggagcctgcc ttctttgggc tctacttctt ggtggtggcg 900
ctgccctatg ccaacagctg tgccaacccc atcctttatg gcttctcttc ctaccgcttc 960
aagcaggggt tccgcagggc cctgctgcgg ccctcccgcg gtgtgcgcag ccaggagccc 1020
actgtggggc ccccgagaga gactgaggag gaggatgagg aggaggagga tggggaggag 1080
agcagggagg ggggcaaggg gaaggagatg aacggccggg tcagccagat cagcagcct 1140
ggcaccagcg ggcaggagcg gccgccagc agagtggcca gcaaggagca gcagctccta 1200
ccccaagagg cttccactgg ggagaagtcc agcacgatgc gcatcagcta cctgtag 1257

<210> 573

<211> 418
 <212> PRT
 <213> Homo sapiens

<400> 573

Met	Asp	Met	Leu	His	Pro	Ser	Ser	Val	Ser	Thr	Thr	Ser	Glu	Pro	Glu	1	5	10	15
Asn	Ala	Ser	Ser	Ala	Trp	Pro	Pro	Asp	Ala	Thr	Leu	Gly	Asn	Val	Ser	20	25	30	
Ala	Gly	Pro	Ser	Pro	Ala	Gly	Leu	Ala	Val	Ser	Gly	Val	Leu	Ile	Pro	35	40	45	
Leu	Val	Tyr	Leu	Val	Val	Cys	Val	Val	Gly	Leu	Leu	Gly	Asn	Ser	Leu	50	55	60	
Val	Ile	Tyr	Val	Val	Leu	Arg	His	Thr	Ala	Ser	Pro	Ser	Val	Thr	Asn	65	70	75	80
Val	Tyr	Ile	Leu	Asn	Leu	Ala	Leu	Ala	Asp	Glu	Leu	Phe	Met	Leu	Gly	85	90	95	
Leu	Pro	Phe	Leu	Ala	Ala	Gln	Asn	Ala	Leu	Ser	Tyr	Trp	Pro	Phe	Gly	100	105	110	
Ser	Leu	Met	Cys	Arg	Leu	Val	Met	Ala	Val	Asp	Gly	Ile	Asn	Gln	Phe	115	120	125	
Thr	Ser	Ile	Phe	Cys	Leu	Thr	Val	Met	Ser	Val	Asp	Arg	Tyr	Leu	Ala	130	135	140	
Val	Val	His	Pro	Thr	Arg	Ser	Ala	Arg	Trp	Arg	Thr	Ala	Pro	Val	Ala	145	150	155	160
Arg	Thr	Val	Ser	Ala	Ala	Val	Trp	Val	Ala	Ser	Ala	Val	Val	Val	Leu	165	170	175	
Pro	Val	Val	Val	Phe	Ser	Gly	Val	Pro	Arg	Gly	Met	Ser	Thr	Cys	His	180	185	190	
Met	Gln	Trp	Pro	Glu	Pro	Ala	Ala	Ala	Trp	Arg	Ala	Gly	Phe	Ile	Ile	195	200	205	
Tyr	Thr	Ala	Ala	Leu	Gly	Phe	Phe	Gly	Pro	Leu	Leu	Val	Ile	Cys	Leu	210	215	220	
Cys	Tyr	Leu	Leu	Ile	Val	Val	Lys	Val	Arg	Ser	Ala	Gly	Arg	Arg	Val	225	230	235	240
Trp	Ala	Pro	Ser	Cys	Gln	Arg	Arg	Arg	Arg	Ser	Glu	Arg	Arg	Val	Lys	245	250	255	
Arg	Met	Val	Val	Ala	Val	Val	Ala	Leu	Phe	Val	Leu	Cys	Trp	Met	Pro	260	265	270	
Phe	Tyr	Val	Leu	Asn	Ile	Val	Asn	Val	Val	Cys	Pro	Leu	Pro	Glu	Glu				

275

280

285

Pro Ala Phe Phe Gly Leu Tyr Phe Leu Val Val Ala Leu Pro Tyr Ala
290 295 300

Asn Ser Cys Ala Asn Pro Ile Leu Tyr Gly Phe Leu Ser Tyr Arg Phe
305 310 315 320

Lys Gln Gly Phe Arg Arg Val Leu Leu Arg Pro Ser Arg Arg Val Arg
325 330 335

Ser Gln Glu Pro Thr Val Gly Pro Pro Glu Lys Thr Glu Glu Glu Asp
340 345 350

Glu Glu Glu Glu Asp Gly Glu Glu Ser Arg Glu Gly Gly Lys Gly Lys
355 360 365

Glu Met Asn Gly Arg Val Ser Gln Ile Thr Gln Pro Gly Thr Ser Gly
370 375 380

Gln Glu Arg Pro Pro Ser Arg Val Ala Ser Lys Glu Gln Gln Leu Leu
385 390 395 400

Pro Gln Glu Ala Ser Thr Gly Glu Lys Ser Ser Thr Met Arg Ile Ser
405 410 415

Tyr Leu

<210> 574
<211> 1167
<212> DNA
<213> Homo sapiens

<400> 574
atgagcgccc cctcgacgct gccccccggg ggcgaggaag ggctggggac ggcctggccc 60
tctgcagcca atgccagtag cgctccggcg gaggcggagg aggcggtggc ggggcccggg 120
gacgcgcggg cggcgggcat ggctcgctatc cagtgcattct acgcgctggt gtgcctggtg 180
gggctggtgg gcaacgccct ggctcatcttc gtgacccaa gatgaagacg 240
gctaccaaca tctacctgct caacctggcc gtacgcgacg agctcttcat gctgagcgtg 300
cccttcgtgg cctcgctggc cgccctgcgc cactggccct tcggctccgt gctgtgccgc 360
gcggtgctca gcgtcgacgg cctcaacatg ttcaccagcg tcttctgtct caccgtgctc 420
agcgtggacc gctacgtggc cgtggtgcac cctctgcgcg cggcgacctt ccggcggccc 480
agcgtggcca agctcatcaa cctgggcgtg tggttggtat ccctgttggt cactctcccc 540
atcgccatct tcgcagacac cagaccggct cgcggcggcc aggcctgggc ctgcaacctg 600
cagtggccac acccggcctg gtcggcagtc ttctgtggtt acactttcct gctgggcttc 660
ctgctgcccg tctgtggcat tggcctgtgc tacctgctca tcgtgggcaa gatgcgcgcc 720
gtggccctgc gcgtgggtg gcagcagcgc aggcgctcgg agaagaaaat caaaaggctg 780
gtgctgatgg tcgtggctgt ctttgtgctc tgctggatgc ctttctacgt ggtgcagctg 840
ctgaacctcg tcgtgaccag ccttgatgcc accgtcaacc acgtgtccct tatcctcagc 900
tatgccaaca gctgcgcaaa ccctattctc tatggcttcc tctccgacaa cttccgcgca 960
tccttccagc ggggttctctg cctgcgtgc tgctcctgg aagggtgctg aggtgctgag 1020
gagggacccc tggactacta tgccactgct ctcaagagca aagggtggggc aggtgcatg 1080
tgccccccac tccccgccg gcaggaagcc ctgcaaccag aaccggccg caagcgcac 1140
cccctacca ggaccaccac cttctga 1167

<210> 575
 <211> 388
 <212> PRT
 <213> Homo sapiens

<400> 575
 Met Ser Ala Pro Ser Thr Leu Pro Pro Gly Gly Glu Glu Gly Leu Gly
 1 5 10 15
 Thr Ala Trp Pro Ser Ala Ala Asn Ala Ser Ser Ala Pro Ala Glu Ala
 20 25 30
 Glu Glu Ala Val Ala Gly Pro Gly Asp Ala Arg Ala Ala Gly Met Val
 35 40 45
 Ala Ile Gln Cys Ile Tyr Ala Leu Val Cys Leu Val Gly Leu Val Gly
 50 55 60
 Asn Ala Leu Val Ile Phe Val Ile Leu Arg Tyr Ala Lys Met Lys Thr
 65 70 75 80
 Ala Thr Asn Ile Tyr Leu Leu Asn Leu Ala Val Ala Asp Glu Leu Phe
 85 90 95
 Met Leu Ser Val Pro Phe Val Ala Ser Ser Ala Ala Leu Arg His Trp
 100 105 110
 Pro Phe Gly Ser Val Leu Cys Arg Ala Val Leu Ser Val Asp Gly Leu
 115 120 125
 Asn Met Phe Thr Ser Val Phe Cys Leu Thr Val Leu Ser Val Asp Arg
 130 135 140
 Tyr Val Ala Val Val His Pro Leu Arg Ala Ala Thr Tyr Arg Arg Pro
 145 150 155 160
 Ser Val Ala Lys Leu Ile Asn Leu Gly Val Trp Leu Ala Ser Leu Leu
 165 170 175
 Val Thr Leu Pro Ile Ala Ile Phe Ala Asp Thr Arg Pro Ala Arg Gly
 180 185 190
 Gly Gln Ala Val Ala Cys Asn Leu Gln Trp Pro His Pro Ala Trp Ser
 195 200 205
 Ala Val Phe Val Val Tyr Thr Phe Leu Leu Gly Phe Leu Leu Pro Val
 210 215 220
 Leu Ala Ile Gly Leu Cys Tyr Leu Leu Ile Val Gly Lys Met Arg Ala
 225 230 235 240
 Val Ala Leu Arg Ala Gly Trp Gln Gln Arg Arg Arg Ser Glu Lys Lys
 245 250 255
 Ile Lys Arg Leu Val Leu Met Val Val Val Val Phe Val Leu Cys Trp
 260 265 270

60593250

Met Pro Phe Tyr Val Val Gln Leu Leu Asn Leu Val Val Thr Ser Leu
275 280 285

Asp Ala Thr Val Asn His Val Ser Leu Ile Leu Ser Tyr Ala Asn Ser
290 295 300

Cys Ala Asn Pro Ile Leu Tyr Gly Phe Leu Ser Asp Asn Phe Arg Arg
305 310 315 320

Ser Phe Gln Arg Val Leu Cys Leu Arg Cys Cys Leu Leu Glu Gly Ala
325 330 335

Gly Gly Ala Glu Glu Glu Pro Leu Asp Tyr Tyr Ala Thr Ala Leu Lys
340 345 350

Ser Lys Gly Gly Ala Gly Cys Met Cys Pro Pro Leu Pro Cys Gln Gln
355 360 365

Glu Ala Leu Gln Pro Glu Pro Gly Arg Lys Arg Ile Pro Leu Thr Arg
370 375 380

Thr Thr Thr Phe
385

<210> 576
<211> 1095
<212> DNA
<213> Homo sapiens

<400> 576
atggagcccc tgttcccagc ctccacgccc agctggaacg cctcctcccc gggggctgcc 60
tctggaggcg gtgacaacag gacgctggtg gggccggcgc cctcggcagg ggcccgggcg 120
gtgctggtgc cegtgtgtga cctgctggtg tgtgcggcgc ggctgggchg gaacacgctg 180
gtcatctacg tgggtgtgch cttcgccaag atgaagaccg tcaccaacat ctacattctc 240
aacctggcag tggccgacgt cctgtacatg ctggggctgc ctttctggc caccgagaac 300
gccgcgtcct tctggccctt cggccccgtc ctgtgccgch tggcatgac gctggacggc 360
gtcaaccagt tcaccagtgt cttctgcctg acagtcatga gcgtggaccg ctacctggca 420
gtggtgcacc cgctgagctc ggcccgtggt cgcgcgcgcg gtgtggccaa gctggcgagc 480
gcgcgggctt gggctcctgtc tctgtgcatg tcgctgccgc tctggtgtt cgcggacgtg 540
caggagggcg gtacctgcaa cgccagctgg cgggagcccg tggggctgtg gggcgccgtc 600
ttcatcatct acacggccgt gctgggcttc ttgcgcgcgc tgctggtcat ctgcctgtgc 660
tacctgctca tcgtggtgaa ggtgagggcg gcgggcgtgc gcgtgggctg cgtgcggcgg 720
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tggctgccct tcttcaccgt caacatcgte aacctggcgg tggcgctgcc ccaggagccc 840
gcctccgcgg gcctctactt cttcgtggte atoctctcct acgccaacag ctgtgccaac 900
cccgtcctct acggttctct ctctgacaac ttccgccaga gtttcagaa ggttctgtgc 960
ctccgcaagg gctctggtgc caaggacgt gacgccacgg agccgcgtcc agacaggatc 1020
cggcagcagc aggaggccac gccgcccgcg caccgcgcgg cagccaacgg gcttatgcag 1080
accagcaagc tgtga 1095

<210> 577
<211> 364
<212> PRT
<213> Homo sapiens

<400> 577

Met Glu Pro Leu Phe Pro Ala Ser Thr Pro Ser Trp Asn Ala Ser Ser
1 5 10 15
Pro Gly Ala Ala Ser Gly Gly Gly Asp Asn Arg Thr Leu Val Gly Pro
20 25 30
Ala Pro Ser Ala Gly Ala Arg Ala Val Leu Val Pro Val Leu Tyr Leu
35 40 45
Leu Val Cys Ala Ala Gly Leu Gly Gly Asn Thr Leu Val Ile Tyr Val
50 55 60
Val Leu Arg Phe Ala Lys Met Lys Thr Val Thr Asn Ile Tyr Ile Leu
65 70 75 80
Asn Leu Ala Val Ala Asp Val Leu Tyr Met Leu Gly Leu Pro Phe Leu
85 90 95
Ala Thr Gln Asn Ala Ala Ser Phe Trp Pro Phe Gly Pro Val Leu Cys
100 105 110
Arg Leu Val Met Thr Leu Asp Gly Val Asn Gln Phe Thr Ser Val Phe
115 120 125
Cys Leu Thr Val Met Ser Val Asp Arg Tyr Leu Ala Val Val His Pro
130 135 140
Leu Ser Ser Ala Arg Trp Arg Arg Pro Arg Val Ala Lys Leu Ala Ser
145 150 155 160
Ala Ala Ala Trp Val Leu Ser Leu Cys Met Ser Leu Pro Leu Leu Val
165 170 175
Phe Ala Asp Val Gln Glu Gly Gly Thr Cys Asn Ala Ser Trp Pro Glu
180 185 190
Pro Val Gly Leu Trp Gly Ala Val Phe Ile Ile Tyr Thr Ala Val Leu
195 200 205
Gly Phe Phe Ala Pro Leu Leu Val Ile Cys Leu Cys Tyr Leu Leu Ile
210 215 220
Val Val Lys Val Arg Ala Ala Gly Val Arg Val Gly Cys Val Arg Arg
225 230 235 240
Arg Ser Glu Arg Lys Val Lys Arg Met Val Leu Val Val Val Leu Val
245 250 255
Phe Ala Gly Cys Trp Leu Pro Phe Phe Thr Val Asn Ile Val Asn Leu
260 265 270
Ala Val Ala Leu Pro Gln Glu Pro Ala Ser Ala Gly Leu Tyr Phe Phe
275 280 285
Val Val Ile Leu Ser Tyr Ala Asn Ser Cys Ala Asn Pro Val Leu Tyr

290

295

300

Gly Phe Leu Ser Asp Asn Phe Arg Gln Ser Phe Gln Lys Val Leu Cys
305 310 315 320

Leu Arg Lys Gly Ser Gly Ala Lys Asp Ala Asp Ala Thr Glu Pro Arg
325 330 335

Pro Asp Arg Ile Arg Gln Gln Gln Glu Ala Thr Pro Pro Ala His Arg
340 345 350

Ala Ala Ala Asn Gly Leu Met Gln Thr Ser Lys Leu
355 360

<210> 578

<211> 1374

<212> DNA

<213> Homo sapiens

<400> 578

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tgggcccttg ggccggcggg cggccaggcg gccaggctgc aggaggagtg tgactatgtg 120
cagatgatcg aggtgcagca caagcagtgc ctggaggagg cccagctgga gaatgagaca 180
ataggtctga gcaagatgtg ggacaacctc acctgctggc cagccacccc tcggggccag 240
gtagtgtgtc tggcctgtcc cctcatcttc aagctcttct cctccattca aggccgcaat 300
gtaagccgca gctgcaccga cgaaggctgg acgcacctgg agcctggccc gtacccatt 360
gcctgtggtt tggatgacaa ggcagcgagt ttggatgagc agcagaccat gttctacggg 420
tctgtgaaga ccggctacac catcggtac ggctgtccc tcgccaccct tctggctgcc 480
acagctatcc tgagcctgtt caggaagctc cactgcacgc ggaactacat ccacatgcac 540
ctcttcatat ccttcatcct gagggctgcc gctgtcttca tcaaagactt ggccctcttc 600
gacagcgggg agtcggacca gtgctccgag ggtcgggtgg gctgtaaggc agccatggtc 660
tttttccaat attgtgtcat ggctaaacttc ttctggctgc tgggtggaggg cctctacctg 720
tacaccctgc ttgccgtctc cttcttctct gagcggaagt acttctgggg gtacatactc 780
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<211> 457

<212> PRT

<213> Homo sapiens

<400> 579

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Lys	Met	Trp	Asp	Asn	Leu	Thr	Cys	Trp	Pro	Ala	Thr	Pro	Arg	Gly	Gln	
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Val	Val	Val	Leu	Ala	Cys	Pro	Leu	Ile	Phe	Lys	Leu	Phe	Ser	Ser	Ile	
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Gln	Gly	Arg	Asn	Val	Ser	Arg	Ser	Cys	Thr	Asp	Glu	Gly	Trp	Thr	His	
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Leu	Glu	Pro	Gly	Pro	Tyr	Pro	Ile	Ala	Cys	Gly	Leu	Asp	Asp	Lys	Ala	
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Phe	Ile	Lys	Asp	Leu	Ala	Leu	Phe	Asp	Ser	Gly	Glu	Ser	Asp	Gln	Cys	
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Ser	Glu	Gly	Ser	Val	Gly	Cys	Lys	Ala	Ala	Met	Val	Phe	Phe	Gln	Tyr	
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Cys	Val	Met	Ala	Asn	Phe	Phe	Trp	Leu	Leu	Val	Glu	Gly	Leu	Tyr	Leu	
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Tyr	Thr	Leu	Leu	Ala	Val	Ser	Phe	Phe	Ser	Glu	Arg	Lys	Tyr	Phe	Trp	
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Gly	Tyr	Ile	Leu	Ile	Gly	Trp	Gly	Val	Pro	Ser	Thr	Phe	Thr	Met	Val	
		260						265					270			
Trp	Thr	Ile	Ala	Arg	Ile	His	Phe	Glu	Asp	Tyr	Gly	Cys	Trp	Asp	Thr	
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Ile	Asn	Ser	Ser	Leu	Trp	Trp	Ile	Ile	Lys	Gly	Pro	Ile	Leu	Thr	Ser	
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Ile	Leu	Val	Asn	Phe	Ile	Leu	Phe	Ile	Cys	Ile	Ile	Arg	Ile	Leu	Leu	
305					310					315					320	
Gln	Lys	Leu	Arg	Pro	Pro	Asp	Ile	Arg	Lys	Ser	Asp	Ser	Ser	Pro	Tyr	
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Ser Arg Leu Ala Arg Ser Pro Leu Leu Ile Pro Leu Phe Gly Val
340 345 350

His Tyr Ile Met Phe Ala Phe Phe Pro Asp Asn Phe Lys Pro Glu Val
355 360 365

Lys Met Val Phe Glu Leu Val Val Gly Ser Phe Gln Gly Phe Val Val
370 375 380

Ala Ile Leu Tyr Cys Phe Leu Asn Gly Glu Val Gln Ala Glu Leu Arg
385 390 395 400

Arg Lys Trp Arg Arg Trp His Leu Gln Gly Val Leu Gly Trp Asn Pro
405 410 415

Lys Tyr Arg His Pro Ser Gly Gly Ser Asn Gly Ala Thr Cys Ser Thr
420 425 430

Gln Val Ser Met Leu Thr Arg Val Ser Pro Gly Ala Arg Arg Ser Ser
435 440 445

Ser Phe Gln Ala Glu Val Ser Leu Val
450 455

<210> 580
<211> 1317
<212> DNA
<213> Homo sapiens

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cttctgaggt ctcaaacaga aaaacacaaa gcctgcagtg gcgtctggga caacatcacg 180
tgctggcggc ctgccaatgt gggagagacc gtcacgggtgc cctgccc aaa agtcttcagc 240
aattttttaca gcaaagcagg aaacataaagc aaaaactgta cgagtgcagg atggtcagag 300
acgttcccag atttcgtcga tgcctgtggc tacagcgacc cggaggatga gagcaagatc 360
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cttgcaacag gaagcataat tctgtgcctc ttcaggaagc tgcactgcac caggaattac 480
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<210> 581

SECRET

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Ala Asn Val Gly Glu Thr Val Thr Val Pro Cys Pro Lys Val Phe Ser
65 70 75 80

Gly Trp Ser Glu Thr Phe Pro Asp Phe Val Asp Ala Cys Gly Tyr Ser
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Ile Tyr Thr Leu Gly Tyr Ser Val Ser Leu Met Ser Leu Ala Thr Gly
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Ser Ile Ile Leu Cys Leu Phe Arg Lys Leu His Cys Thr Arg Asn Tyr
145 150 155 160

Ile His Leu Asn Leu Phe Leu Ser Phe Ile Leu Arg Ala Ile Ser Val
165 170 175

Leu Val Lys Asp Asp Val Leu Tyr Ser Ser Ser Gly Thr Leu His Cys
180 185 190

Pro Asp Gln Pro Ser Ser Trp Val Gly Cys Lys Leu Ser Leu Val Phe
195 200 205

Leu Gln Tyr Cys Ile Met Ala Asn Phe Phe Trp Leu Leu Val Glu Gly
210 215 220

Leu Tyr Leu His Thr Leu Leu Val Ala Met Leu Pro Pro Arg Arg Cys
225 230 235 240

Phe Leu Ala Tyr Leu Leu Ile Gly Trp Gly Leu Pro Thr Val Cys Ile
245 250 255

Gly Ala Trp Thr Ala Ala Arg Leu Tyr Leu Glu Asp Thr Gly Cys Trp
260 265 270

Asp Thr Asn Asp His Ser Val Pro Trp Trp Val Ile Arg Ile Pro Ile

275 280 285
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 305 310 315 320
 Ser Gln Tyr Lys Arg Leu Ala Lys Ser Pro Leu Leu Leu Ile Pro Leu
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 Phe Gly Val His Tyr Met Val Phe Ala Val Phe Pro Ile Ser Ile Ser
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 Ser Lys Tyr Gln Ile Leu Phe Glu Leu Cys Leu Gly Ser Phe Gln Gly
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 370 375 380
 Glu Leu Lys Arg Lys Trp Arg Ser Arg Cys Pro Thr Pro Ser Ala Ser
 385 390 395 400
 Arg Asp Tyr Arg Val Cys Gly Ser Ser Phe Ser His Asn Gly Ser Glu
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 <213> Homo sapiens

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<210> 583
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 <211> 1181
 <212> PRT
 <213> Homo sapiens

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 Gln Glu Glu Asp Phe Arg Val Thr Cys Lys Asp Ile Gln Arg Ile Pro
 35 40 45
 Ser Leu Pro Pro Ser Thr Gln Thr Leu Lys Leu Ile Glu Thr His Leu
 50 55 60
 Arg Thr Ile Pro Ser His Ala Phe Ser Asn Leu Pro Asn Ile Ser Arg
 65 70 75 80
 Ile Tyr Val Ser Ile Asp Val Thr Leu Gln Gln Leu Glu Ser His Ser
 85 90 95
 Phe Tyr Asn Leu Ser Lys Val Thr His Ile Glu Ile Arg Asn Thr Arg
 100 105 110
 Asn Leu Thr Tyr Ile Asp Pro Asp Ala Leu Lys Glu Leu Pro Leu Leu
 115 120 125
 Lys Ser Leu Ala Phe Ser Asn Thr Gly Leu Lys Met Phe Pro Asp Leu
 130 135 140
 Thr Lys Val Tyr Ser Thr Asp Ile Phe Phe Ile Leu Glu Ile Thr Asp

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Gln	Gly	Tyr 195	Asp	Phe	Phe	Gly	Thr 200	Lys	Leu	Asp	Ala	Val 205	Tyr	Leu	Asn		
Lys	Asn 210	Lys	Tyr	Leu	Thr	Val 215	Ile	Asp	Lys	Asp	Ala 220	Phe	Gly	Gly	Val		
Tyr 225	Ser	Gly	Pro	Ser	Leu 230	Leu	Asp	Val	Ser	Gln 235	Thr	Ser	Val	Thr	Ala 240		
Leu	Pro	Ser	Lys	Gly 245	Leu	Glu	His	Leu	Lys 250	Glu	Leu	Ile	Ala	Arg 255	Asn		
Ser	Trp	Thr	Leu 260	Lys	Lys	Leu	Ala	Leu 265	Ser	Leu	Ser	Phe	Leu 270	His	Leu		
Thr	Arg	Ala 275	Asp	Leu	Ser	Tyr	Pro 280	Ser	His	Cys	Cys	Ala 285	Phe	Lys	Asn		
Gln	Lys 290	Lys	Ile	Arg	Gly	Ile 295	Leu	Glu	Ser	Leu	Met 300	Cys	Asn	Glu	Ser		
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Pro	Leu	His	Gln	Glu 325	Tyr	Glu	Glu	Asn	Leu 330	Gly	Asp	Ser	Ile	Val 335	Gly		
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Glu 370	Leu	Lys	Asn	Pro	Gln	Glu 375	Glu	Thr	Leu	Gln	Ala 380	Phe	Asp	Ser	His		
Tyr 385	Asp	Tyr	Thr	Ile	Cys 390	Gly	Asp	Ser	Glu	Asp 395	Met	Val	Cys	Thr	Pro 400		
Lys	Ser	Asp	Glu	Phe 405	Asn	Pro	Cys	Glu	Asp 410	Ile	Met	Gly	Tyr	Lys 415	Phe		
Leu	Arg	Ile	Val 420	Val	Trp	Phe	Val	Ser 425	Leu	Leu	Ala	Leu	Leu 430	Gly	Asn		
Val	Phe 435	Val	Leu	Leu	Ile	Leu	Leu 440	Thr	Ser	His	Tyr	Lys 445	Leu	Asn	Val		
Pro	Arg	Phe	Leu	Met	Cys	Asn	Leu	Ala	Phe	Ala	Asp	Phe	Cys	Met	Gly		

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Met Tyr Leu Leu Leu Ile Ala Ser Val Asp Leu Tyr Thr His Ser Glu				
465		470		475 480
Tyr Tyr Asn His Ala Ile Asp Trp Gln Thr Gly Pro Gly Cys Asn Thr				
	485		490	495
Ala Gly Phe Phe Thr Val Phe Ala Ser Glu Leu Ser Val Tyr Thr Leu				
	500		505	510
Thr Val Ile Thr Leu Glu Arg Trp Tyr Ala Ile Thr Phe Ala Met Ala				
	515		520	525
Leu Asp Arg Lys Ile Arg Leu Arg His Ala Cys Ala Ile Met Val Gly				
	530		535	540
Gly Trp Val Cys Cys Phe Leu Leu Ala Leu Leu Pro Leu Val Gly Ile				
	545		550	555 560
Ser Ser Tyr Ala Lys Val Ser Ile Cys Leu Pro Met Asp Thr Glu Thr				
	565		570	575
Pro Leu Ala Leu Ala Tyr Ile Val Phe Val Leu Thr Leu Asn Ile Val				
	580		585	590
Ala Phe Val Ile Val Cys Cys Cys Tyr Val Lys Ile Tyr Ile Thr Val				
	595		600	605
Arg Asn Pro His Asn Pro Gly Asp Lys Asp Thr Lys Ile Ala Lys Arg				
	610		615	620
Met Ala Val Leu Ile Phe Thr Asp Phe Thr Cys Met Ala Pro Ile Ser				
	625		630	635 640
Phe Tyr Ala Val Ser Ala Ile Leu Asn Lys Pro Leu Ile Thr Val Ser				
	645		650	655
Asn Ser Lys Ile Leu Leu Val Leu Phe Tyr Pro Ile Asn Ser Cys Ala				
	660		665	670
Asn Pro Phe Leu Tyr Ala Ile Phe Thr Lys Ala Phe Gln Arg Asp Val				
	675		680	685
Phe Ile Leu Leu Ser Lys Phe Gly Ile Cys Lys Arg Gln Ala Gln Ala				
	690		695	700
Tyr Arg Gly Gln Arg Val Pro Pro Lys Asn Ser Thr Asp Ile Gln Val				
	705		710	715 720
Gln Lys Val Thr His Asp Met Arg Gln Gly Leu His Asn Met Glu Asp				
	725		730	735
Val Tyr Glu Leu Ile Glu Asn Ser His Leu Thr Pro Lys Lys Gln Gly				
	740		745	750
Gln Ile Ser Glu Glu Tyr Met Gln Thr Val Leu Ala Ile Ser Ala Glu				

755					760					765					
Phe	His	His	Thr	Gly	Leu	Val	Asp	Pro	Ser	Ser	Val	Pro	Ser	Leu	Gly
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Cys	Arg	Ser	Met	Gly	Cys	Leu	Gly	Asn	Ser	Lys	Thr	Glu	Asp	Gln	Arg
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Leu	Gly	Ala	Gly	Glu	Ser	Gly	Lys	Ser	Thr	Ile	Val	Lys	Gln	Met	Arg
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Ile	Leu	His	Val	Asn	Gly	Phe	Asn	Gly	Glu	Gly	Gly	Glu	Glu	Asp	Pro
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Asp	Ile	Lys	Asn	Asn	Leu	Lys	Glu	Ala	Ile	Glu	Thr	Ile	Val	Ala	Ala
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Phe	Arg	Val	Asp	Tyr	Ile	Leu	Ser	Val	Met	Asn	Val	Pro	Asn	Phe	Asp
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Phe	Pro	Pro	Glu	Phe	Tyr	Glu	His	Ala	Lys	Ala	Leu	Trp	Glu	Asp	Glu
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Cys	Ala	Gln	Tyr	Phe	Leu	Asp	Lys	Ile	Asp	Val	Ile	Lys	Gln	Ala	Asp
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Tyr	Val	Pro	Ser	Asp	Gln	Asp	Leu	Leu	Arg	Cys	Arg	Val	Leu	Thr	Ser
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Gly	Ile	Phe	Glu	Thr	Lys	Phe	Gln	Val	Asp	Lys	Val	Asn	Phe	His	Met
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Phe	Asp	Val	Gly	Gly	Gln	Arg	Asp	Glu	Arg	Arg	Lys	Trp	Ile	Gln	Cys
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Phe	Asn	Asp	Val	Thr	Ala	Ile	Ile	Phe	Val	Val	Ala	Ser	Ser	Ser	Tyr
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Asn	Met	Val	Ile	Arg	Glu	Asp	Asn	Gln	Thr	Asn	Arg	Leu	Gln	Glu	Ala
			1045					1050					1055		
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1060

1065

1070

Ser Val Ile Leu Phe Leu Asn Lys Gln Asp Leu Leu Ala Glu Lys Val
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Leu Ala Gly Lys Ser Lys Ile Glu Asp Tyr Phe Pro Glu Phe Ala Arg
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Tyr Thr Thr Pro Glu Asp Ala Thr Pro Glu Pro Gly Glu Asp Pro Arg
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Val Thr Arg Ala Lys Tyr Phe Ile Arg Asp Glu Phe Leu Arg Ile Ser
 1125 1130 1135

Thr Ala Ser Gly Asp Gly Arg His Tyr Cys Tyr Pro His Phe Thr Cys
 1140 1145 1150

Ala Val Asp Thr Glu Asn Ile Arg Arg Val Phe Asn Asp Cys Arg Asp
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Ile Ile Gln Arg Met His Leu Arg Gln Tyr Glu Leu Leu
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 35 40 45
 Thr Ile Cys Leu Leu Gly Ile Ile Gly Asn Ser Thr Val Ile Phe Ala
 50 55 60
 Val Val Lys Lys Ser Lys Leu His Trp Cys Asn Asn Val Pro Asp Ile
 65 70 75 80
 Phe Ile Ile Asn Leu Ser Val Val Asp Leu Leu Phe Leu Leu Gly Met
 85 90 95
 Pro Phe Met Ile His Gln Leu Met Gly Asn Gly Val Trp His Phe Gly
 100 105 110
 Glu Thr Met Cys Thr Leu Ile Thr Ala Met Asp Ala Asn Ser Gln Phe
 115 120 125
 Thr Ser Thr Tyr Ile Leu Thr Ala Met Ala Ile Asp Arg Tyr Leu Ala
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 Thr Val His Pro Ile Ser Ser Thr Lys Phe Arg Lys Pro Ser Val Ala
 145 150 155 160
 Thr Leu Val Ile Cys Leu Leu Trp Ala Leu Ser Phe Ile Ser Ile Thr
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 Pro Val Trp Leu Tyr Ala Arg Leu Ile Pro Phe Pro Gly Gly Ala Val
 180 185 190
 Gly Cys Gly Ile Arg Leu Pro Asn Pro Asp Thr Asp Leu Tyr Trp Phe
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 Thr Leu Tyr Gln Phe Phe Leu Ala Phe Ala Leu Pro Phe Val Val Ile

105040-60592360

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Pro	Ala	Ser	Gln	Arg	Ser	Ile	Arg	Leu	Arg	Thr	Lys	Arg	Val	Thr	Arg
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Thr	Ala	Ile	Ala	Ile	Cys	Leu	Val	Phe	Phe	Val	Cys	Trp	Ala	Pro	Tyr
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Tyr	Val	Leu	Gln	Leu	Thr	Gln	Leu	Ser	Ile	Ser	Arg	Pro	Thr	Leu	Thr
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Phe	Val	Tyr	Leu	Tyr	Asn	Ala	Ala	Ile	Ser	Leu	Gly	Tyr	Ala	Asn	Ser
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Arg	Leu	Val	Leu	Ser	Val	Lys	Pro	Ala	Ala	Gln	Gly	Gln	Leu	Arg	Ala
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Lys	Ser	Thr	Ile	Val	Lys	Gln	Met	Lys	Ile	Ile	His	Glu	Ala	Gly	Tyr
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Ser	Glu	Glu	Glu	Cys	Lys	Gln	Tyr	Lys	Ala	Val	Val	Tyr	Ser	Asn	Thr
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Val	Ile	Lys	Arg	Leu	Trp	Lys	Asp	Ser	Gly	Val	Gln	Ala	Cys	Phe	Asn
				485					490					495	
Arg	Ser	Arg	Glu	Tyr	Gln	Leu	Asn	Asp	Ser	Ala	Ala	Tyr	Tyr	Leu	Asn
			500					505					510		
Asp	Leu	Asp	Arg	Ile	Ala	Gln	Pro	Asn	Tyr	Ile	Pro	Thr	Gln	Gln	Asp

515

520

525

Val Leu Arg Thr Arg Val Lys Thr Thr Gly Ile Val Glu Thr His Phe
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Thr Phe Lys Asp Leu His Phe Lys Met Phe Asp Val Gly Gly Gln Arg
545 550 555 560

Ser Glu Arg Lys Lys Trp Ile His Cys Phe Glu Gly Val Thr Ala Ile
565 570 575

Ile Phe Cys Val Ala Leu Ser Asp Tyr Asp Leu Val Leu Ala Glu Asp
580 585 590

Glu Glu Met Asn Arg Met His Glu Ser Met Lys Leu Phe Asp Ser Ile
595 600 605

Cys Asn Asn Lys Trp Phe Thr Asp Thr Ser Ile Ile Leu Phe Leu Asn
610 615 620

Lys Lys Asp Leu Phe Glu Glu Lys Ile Lys Lys Ser Pro Leu Thr Ile
625 630 635 640

Cys Tyr Pro Glu Tyr Ala Gly Ser Asn Thr Tyr Glu Glu Ala Ala Ala
645 650 655

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Glu Ile Tyr Thr His Phe Thr Cys Ala Thr Asp Thr Lys Asn Val Gln
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Phe Val Phe Asp Ala Val Thr Asp Val Ile Ile Lys Asn Asn Leu Lys
690 695 700

Asp Cys Gly Leu Phe
705